FIGURE 318

GAGCCTGACTTCAGCGCTCCCACTCTCGGCCGACACCCCTCATGGCCAACCGTTACACC**ATG**GATCTGACTGCCA
TCTACGAGAGCCTCCTGTCGCTGAGCCCTGACGTGCCCGTGCCATCCGACCATGGAGGGACTGAGTCCAGCCCAG
GCTGGGGCTCCTCGGGACCCTGGAGCCTGAGCCCCTCCGACTCCAGCCCGTCTGGGGTCACCTCCCGCCTGCCTG
GCCGCTCCACCAGCCTAGTGGAGGGCCGCAGCTGTGGCTGGGTGCCCCCACCCCCTGGCTTCGCACCGCTGGCTC
CCCGCCTGGGCCCTGAGCTGTCACCCTCACCCACTTCGCCCACTGCAACCTCCACCACCCCCTCGCGCTACAAGA
CTGAGCTATGTCGGACCTTCTCAGAGAGTGGGCGCTGCCGCTACGGGGCCAAGTGCCAGTTTGCCCATGGCCTGG
GCGAGCTGCGCCAGGCCAATCGCCACCCCAAATACAAGACGGAACTCTGTCACAAGTTCTACCTCCAGGGCCGCT
GCCCCTACGGCTCTCGCTGCCACTTCATCCACAACCCTAGCGAAGACCTGGCGGCCCCGGGCCACCCTCCTGTGC
TTCGCCAGAGCATCAGCTTCTCCGGCCTGCCCTCTGGCCGCCGGACCTCACCACCACCACCAGGCCTGGCCGGCC
CTTCCCTGTCCTCCAGCTCCTTCTCGCCCTCCAGCTCCCCACCACCACCTGGGGACCTTCCACTGTCACCCTCTG
CCTTCTCTGCTGCCCCTGGCACCCCCCTGGCTCGAAGAGACCCCACCCCAGTCTGTTGCCCCTCCTGCCGAAGGG
CCACTCCTATCAGCGTCTGGGGGCCCTTGGGTGGCCTGGTTCGGACCCCCTCTGTACAGTCCCTGGGATCCGACC
CTGATGAATATGCCAGCAGCGGCAGCAGCCTGGGGGGCTCTGACTCTCCCGTCTTCGAGGCGGGAGTTTTTGCAC
CACCCCAGCCCGTGGCAGCCCCCCGGCGACTCCCCATCTTCAATCGCATCTCTGTTTCTGAG**TGA**CAAAGTGACT
GCCCGGTCAGATCAGCTGGATCTCAGCGGGGAGCCACGTCTCTTGCACTGTGGTCTCTGCATGGACCCCAGGGCT
GTGGGGACTTGGGGGACAGTAATCAAGTAATCCCCTTTTCCAGAATGCATTAACCCACTCCCCTGACCTCACGCT
GGGGCAGGTCCCCAAGTGTGCAAGCTCAGTATTCATGATGGTGGGGGATGGAGTGTCTTCCGAGGTTCTTGGGGG
AAAAAAAATTGTAGCATATTTAAGGGAGGCAATGAACCCTCTCCCCCACCTCTTCCCTGCCCAAATCTGTCTCCT
AGAATCTTATGTGCTGTGAATAATAGGCCTTCACTGCCCCTCCAGTTTTTATAGACCTGAGGTTCCAGTGTCTCC
TGGTAACTGGAACCTCTCCTGAGGGGGAATCCTGGTGCTCAAATTACCCTCCAAAAGCAAGTAGCCAAAGCCGTT
GCCAAACCCCACCCATAAATCAATGGGCCCTTTATTTATGACGACTTTATTTATTCTAATATGATTTTATAGTAT
TTATATATATTGGGTCGTCTGCTTCCCTTGTATTTTTCTTCCTTTTTTTGTAATATTGAAAACGACGATATAATT
ATTATAAGTAGACTATAATATATTTAGTAATATATATTATTACCTTAAAAGTCTATTTTTGTGTTTTGGGCATTT
TTAAATAAACAATCTGAGTGT

FIGURE 319

MDLTAIYESLLSLSPDVPVPSDHGGTESSPGWGSSGPWSLSPSDSSPSGVTSRLPGRSTSLVEGRSCGWVPPPPG
FAPLAPRLGPELSPSPTSPTATSTTPSRYKTELCRTFSESGRCRYGAKCQFAHGLGELRQANRHPKYKTELCHKF
YLQGRCPYGSRCHFIHNPSEDLAAPGHPPVLRQSISFSGLPSGRRTSPPPPGLAGPSLSSSSFSPSSSPPPPGDL
PLSPSAFSAAPGTPLARRDPTPVCCPSCRRATPISVWGPLGGLVRTPSVQSLGSDPDEYASSGSSLGGSDSPVFE
AGVFAPPQPVAAPRRLPIFNRISVSE

FIGURE 320

GCACG**ATG**AGCTCAATCGGCACTGGGTATGACCTGTCAGCCTCTACATTCTCTCCTGACGGAAGAGTTTTTCAAG
TTGAATATGCTATGAAGGCTGTGGAAAATAGTAGTACAGCTATTGGAATCAGATGCAAAGATGGTGTTGTCTTTG
GGGTAGAAAAATTAGTCCTTTCTAAACTTTATGAAGAAGGTTCCAACAAAAGACTTTTTAATGTTGATCGGCATG
TTGGAATGGCAGTAGCAGGTTTGTTGGCAGATGCTCGTTCTTTAGCAGACATAGCAAGAGAAGAAGCTTCCAACT
TCAGATCTAACTTTGGCTACAACATTCCACTAAAACATCTTGCAGACAGAGTGGCCATGTATGTGCATGCATATA
CACTCTACAGTGCTGTTAGACCTTTTGGCTGCAGTTTCATGTTAGGGTCTTACAGTGTGAATGACGGTGCGCAAC
TCTACATGATTGACCCATCAGGTGTTTCATACGGTTATTGGGGCTGTGCCATCGGCAAAGCCAGGCAAGCTGCAA
AGACGGAAATAGAGAAGCTTCAGATGAAAGAAATGACCTGCCGTGATATCGTTAAAGAAGTTGCAAAAATAATTT
ACATAGTACATGACGAAGTTAAGGATAAAGCTTTTGAACTAGAACTCAGCTGGGTTGGTGAATTAACTAATGGAA
GACATGAAATTGTTCCAAAAGATATAAGAGAAGAAGCAGAGAAATATGCTAAGGAATCTCTGAAGGAAGAAGATG
AATCAGATGATGATAATATG**TAA**CATTTACTCCAGCATCTATTGTATTTTAAATTTCTACTCCAGTCCAATGTAA
CTATTTAGCCCTG

FIGURE 321

MSSIGTGYDLSASTFSPDGRVFQVEYAMKAVENSSTAIGIRCKDGVVFGVEKLVLSKLYEEGSNKRLFNVDRHVG
MAVAGLLADARSLADIAREEASNFRSNFGYNIPLKHLADRVAMYVHAYTLYSAVRPFGCSFMLGSYSVNDGAQLY
MIDPSGVSYGYWGCAIGKARQAAKTEIEKLQMKEMTCRDIVKEVAKIIYIVHDEVKDKAFELELSWVGELTNGRH
EIVPKDIREEAEKYAKESLKEEDESDDDNM

FIGURE 322

GCACGAGGCTCCGCCTCGCTTGCTCCTGCCGGGCGTGCAGGGCCCCGCCGCCGCC**ATG**TCGGGCTCGTTCGAGCT
CTCGGTGCAGGATCTCAACGACCTGCTCTCGGACGGCAGCGGCTGCTACAGCCTCCCGAGCCAGCCCTGCAACGA
GGTCACCCCGCGGATCTACGTGGGCAACGCGTCTGTGGCTCAGGACATCCCCAAGCTGCAGAAACTAGGCATCAC
CCATGTGCTGAACGCGGCTGAGGGCAGGTCCTTCATGCACGTCAACACCAATGCCAACTTCTACAAGGACTCCGG
CATCACATACCTGGGCATCAAGGCCAACGACACACAGGAGTTCAACCTCAGCGCTTACTTTGAAAGGGCTGCCGA
CTTCATTGACCAGGCTTTGGCTCAAAAGAATGGCCGGGTGCTCGTCCACTGCCGGGAAGGTTATAGCCGCTCCCC
AACGCTAGTTATCGCCTACCTCATGATGCGGCAGAAGATGGACGTCAAGTCTGCCCTGAGCATCGTGAGGCAGAA
CCGTGAGATCGGCCCCAACGATGGCTTCCTGGCCCAGCTCTGCCAGCTCAATGACAGACTAGCCAAGGAGGGGAA
GTTGAAACCC**TAG**GGCACCCCCACCGCCTCTGCTCGAGAGGTCCGTGGGGGAGGCCGTGGGCAAAGGTGTCCCGA
GCTGCCATGTTTAGGAAACACACTGTACCCTGCTCCCAGCATCACAAGGCACTTGTCTACAAGTGTGTCCCAACA
CAGTCCTGGGCCACTTTCCCCACCCTGGGGAGCACATAAAGAAGCTTGCCAAGGGGGGCGTCCTTGCTCCCCAGT
TGTCCTGTTTCTGTAACTTATGATGTCTTTTCCCTGAGATGGGGGCTCAGAGGGGGAAGGCCTGTGGCCTGCATG
CTTCCCGATGGCCCACGGCAGGAGGTGTGTGGAAGTGTAAGGCCTAAGATGCTCACAGAGGTCCCTCATGACCTC
CCTTCCCCAACTCCCGAATCCTCTCTTGAGTGTGGACCTCAACACCTTGAGCCCTAGTAAAGGAACTATGCAAAT
GCAGGCCACTCTCCCCACCACGTCTGTGCCCCGCACTGTCCCCACAGCCTTCCACACCCTGTGCATAGGCAGCCC
TCTCACGTCTTGAGGTCCGAAGCTGGGGTGGGGGTGTCCGTCAGTTATTAGTGGATGGAGATTCCCACAGCAAGG
CTGCATTTGAATGATTTCCTTAGGATGAATGGTCCCTACACAAAGAGGCCTTGTGGGCAAACCTGGAGAACCCTC
CTAAATCCATAGAGTTTTCAAAATGTGAATCTTTGGAAGCCTTGAGTTCAGAATCTGCTGCTCTGGAATATTTCC
CTTCGATCTTATCTCAGTCACTTCGTTTTTGAGAAGAGTGATGCCTTGGGTATGCTTTTTTTTTTCTTTTTTAG
AAAACAGGGAGTTGAAGTCCAACCTATTTAAAAACCCCACCATTTGGAGAATTACAAGGGTTTTGTCCTGAATTG
TAGTGTTGGCAAGCCCAAGCCACTCGTGCTAACTGCTTTTTGTCTCGGTTGCTATTCCAAGAACAGAAGGAGGAA
GTTGGCCAATTACAGCGTGTGTGCATGGATGTGTGTGGGGGGCGTGCCTCTCAGAAACGCGGCCAGAAGACAAGC
AGGGAAGTGAAAGGTCCCAGGCACACACCCTGCCCATTGCAGGTGGCTCTTACAGCTCTCTGGTGCCAGCACGGG
ATCCCTGAAGTGACTCAGCCAGGCAGACATGAGACATGGCGGAGTGTCCAAATGGATCCTTTATTGGTGGTAGAG
CAAAAAAACCCAAACACGATAAACCTTTCAAAAGACTTTCTAAGGATGATATTGGAATGCACCAGCCCTCACATG
TGTATGCACATTTGCCAGAATATAAGAGTTTTGTTTTAAAAAAAAAAAAAAAAAA

FIGURE 323

MSGSFELSVQDLNDLLSDGSGCYSLPSQPCNEVTPRIYVGNASVAQDIPKLQKLGITHVLNAAEGRSFMHVNTNA
NFYKDSGITYLGIKANDTQEFNLSAYFERAADFIDQALAQKNGRVLVHCREGYSRSPTLVIAYLMMRQKMDVKSA
LSIVRQNREIGPNDGFLAQLCQLNDRLAKEGKLKP

FIGURE 324

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GAATTCGGGCGGGCTTCTTCGCTGCCGACGTACGACGAGTGGCCGGGCTCTTGCGTCTGGTAACGCGCTGTCTCT
AACGCCAGCGCCGTCTCGCGCGCACTGCGCACAGACCACCCGCAGACGCCCGGCAGTCCGCAGGCCCAAACGCGC
ACGCGACCCCGCTCTCCGCACCGTACCCGGCCGCCTCGGCATGGCGCCCCGCAGCGCCCGGCGACCCCTGCTGCT
GCTACTGCCTGTTGCTGCTGCTCGGCCTCATGCATTGTCGTCAGCAGCCATGTTTATGGTGAAAAATGGCAACGG
GACCGCGTGCATAATGGCCAACTTCTCTGCTGCCTTCTCAGTGAACTACGACACCAAGAGTGGCCCCAAGAACAT
GACCTTTGACCTGCCATCAGATGCCACAGTGGTGCTCAACCGCAGCTCCTGTGGAAAAGAGAACACTTCTGACCC
CAGTCTCGTGATTGCTTTTGGAAGAGGACATACACTCACTCTCAATTTCACGAGAAATGCAACACGTTACAGCGT
TCAGCTCATGAGTTTTGTTTATAACTTGTCAGACACACACCTTTTCCCCAATGCGAGCTCCAAAGAAATCAAGAC
TGTGGAATCTATAACTGACATCAGGGCAGATATAGATAAAAAATACAGATGTGTTAGTGGCACCCAGGTCCACAT
GAACAACGTGACCGTAACGCTCCATGATGCCACCATCCAGGCGTACCTTTCCAACAGCAGCTTCAGCAGGGGAGA
GACACGCTGTGAACAAGACAGGCCTTCCCCAACCACAGCGCCCCCTGCGCCACCCAGCCCCTCGCCCTCACCCGT
GCCCAAGAGCCCCTCTGTGGACAAGTACAACGTGAGCGGCACCAACGGGACCTGCCTGCTGGCCAGCATGGGGCT
GCAGCTGAACCTCACCTATGAGAGGAAGGACAACACGACGGTGACAAGGCTTCTCAACATCAACCCCAACAAGAC
CTCGGCCAGCGGGAGCTGCGGCGCCCACCTGGTGACTCTGGAGCTGCACAGCGAGGGCACCACCGTCCTGCTCTT
CCAGTTCGGGATGAATGCAAGTTCTAGCCGGTTTTTCCTACAAGGAATCCAGTTGAATACAATTCTTCCTGACGC
CAGAGACCCTGCCTTTAAAGCTGCCAACGGCTCCCTGCGAGCGCTGCAGGCCACAGTCGGCAATTCCTACAAGTG
CAACGCGGAGGAGCACGTCCGTGTCACGAAGGCGTTTTCAGTCAATATATTCAAAGTGTGGGTCCAGGCTTTCAA
GGTGGAAGGTGGCCAGTTTGGCTCTGTGGAGGAGTGTCTGCTGGACGAGAACAGCACGCTGATCCCCATCGCTGT
GGGTGGTGCCCTGGCGGGGCTGGTCCTCATCGTCCTCATCGCCTACCTCGTCGGCAGGAAGAGGAGTCACGCAGG
CTACCAGACTATCTAGCCTGGTGCACGCAGGCACAGCAGCTGCAGGGGCCTCTGTTCCTTTCTCTGGGCTTAGGG
TCCTGTCGAAGGGGAGGCACACTTTCTGCAAACGTTTCTCAAATCTGCTTCATCCAATGTGAAGTTCATCTTGCA
GCATTACTATGCACAACAGAGTAACTATCGAAATGACGGTGTTAATTTTGCTAACTGGGTTAAATATTTTGCTA
ACTGGTTAAACATTAATATTTACCAAAGTAGGATTTTGAGGGTGGGGGTGCTCTCTCTGAGGGGGTGGGGGTGCC
GCTGTCTCTGAGGGGGTGGGGGTGCCGCTGTCTGAGGGGGTGGGGGTGCCGCTCTCTCTGAGGGGGTGGGGGTGCCG
CTTTCTCTGAGGGGGTGGGGGTGCCGCTCTCTCTGAGGGGGTGGGGGTGCTGCTCTCTCCGAGGGGGTGGAATGCC
GCTGTCTCTGAGGGGGTGGGGGTGCCGCTCTAAATTGGCTCCATATCATTGAGTTTAGGGTTCTGGTGTTTGGTTT
CTTCATTCTTTACTGCACTCAGATTTAAGCCTTACAAAGGGAAACCTCTGGCCGTCACACGTAGGACGCATGAAG
GTCACTCGTGTGAGGCTGACATGCTCACACATTACAACAGTAGAGAGGGAAAATCCTAAGACAGAGGAACTCCAG
AGATGAGTGTCTGGAGCGGCTTCAGTTCAGCTTTAAAGGCCAGGACGCGCGACACGTGGCTGGCGGCCTCGTTCC
AGTGGCGGCACGTCCTTGGCGTCTCTAATGTCTGCAGCTCAAGGGCTGGCACTTTTTTAAATATAAAAATGGTGT
TATTTTTATTTTTTTTTGTAAAGTGATTTTTGGTCTTCTGTTGACATTCGGGTGATCCTGTTCTGCGCTGTGTAC
AATGTGAGATCGGTGCGTTCTCCTGATGTTTTGCCGTGGCTTGGGGATTGTACACGGGACCAGCTCACGTAATGC
ATTGCCTGTAACAATGTAATAAAAAGCCTCTTTCTTTCAAAAAAACCCCGAATTC
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FIGURE 325

MAPRSARRPLLLLLPVAAARPHALSSAAMFMVKNGNGTACIMANFSAAFSVNYDTKSGPKNMTFDLPSDATVVLN
RSSCGKENTSDPSLVIAFGRGHTLTLNFTRNATRYSVQLMSFVYNLSDTHLFPNASSKEIKTVESITDIRADIDK
KYRCVSGTQVHMNNVTVTLHDATIQAYLSNSSFSRGETRCEQDRPSPTTAPPAPPSPSPSPVPKSPSVDKYNVSG
TNGTCLLASMGLQLNLTYERKDNTTVTRLLNINPNKTSASGSCGAHLVTLELHSEGTTVLLFQFGMNASSSRFFL
QGIQLNTILPDARDPAFKAANGSLRALQATVGNSYKCNAEEHVRVTKAFSVNIFKVWVQAFKVEGGQFGSVEECL
LDENSTLIPIAVGGALAGLVLIVLIAYLVGRKRSHAGYQTI

FIGURE 326A

AAGCGGCTCGGGCTGCGGCTGGCTCAGAGTGCCGCGGGGGGCGTGGGGCGGTGCTGAGGAGCTGAAGCCGTGGCC
AGCTCGACTCCGGACAGTCCAGCGAGCAGCACGGCGGGAACCGGCAGCCGGAGCAGTCCCGGAGCAGAAGCAGCA
GCAGCAGCAGCAGCCCTCGCCGTTCGCGGAGCGCAGCCGAGCCGGCC**ATG**GCGTTGTCGATGCCGCTGAATGGGC
TGAAGGAGGAGGACAAAGAGCCCCTCATCGAGCTCTTCGTCAAGGCTGGCAGTGATGGTGAAAGCATAGGAAACT
GCCCCTTTTCCCAGAGGCTCTTCATGATTCTTTGGCTCAAAGGAGTTGTATTTAGTGTGACGACTGTTGACCTGA
AAAGGAAGCCAGCAGACCTGCAGAACTTGGCTCCCGGGACCCACCCACCATTTATAACTTTCAACAGTGAAGTCA
AAACGGATGTAAATAAGATTGAGGAATTTCTTGAAGAGGTCTTATGCCCTCCCAAGTACTTAAAGCTTTCACCAA
AACACCCAGAATCAAATACTGCTGGAATGGACATCTTTGCCAAATTCTCTGCATATATCAAGAATTCAAGGCCAG
AGGCTAATGAAGCACTGGAGAGGGGTCTCCTGAAAACCCTGCAGAAACTGGATGAATATCTGAATTCTCCTCTCC
CTGATGAAATTGATGAAAATAGTATGGAGGACATAAAGTTTTCTACACGTAAATTTCTGGATGGCAATGAAATGA
CATTAGCTGATTGCAACCTGCTGCCCAAACTGCATATTGTCAAGGTGGTGGCCAAAAAATATCGCAACTTTGATA
TTCCAAAAGAAATGACTGGCATCTGGAGATACCTAACTAATGCATACAGTAGGGACGAGTTCACCAATACCTGTC
CCAGTGATAAGGAGGTTGAAATAGCATATAGTGATGTAGCCAAAAGACTCACCAAG**TAA**AATCGCGTTTGTAAAA
GAGATGTCTTCATGTCTTCCCCTAAGAATACGCTTTTCCTAACAGGCTACTCCTTCCTGTAGAGCAGAAATTGTA
TTTTGCACGAACATGCAGTTATTGAAGATTAGGATCAAGGATAGACAAGGTATAGTAGTTATCTTAAAATATACA
CTCCTAAGCAGTATTATTTTAAAATCCTTTACCCTGGCTACCTCCCCTACCCGGGTTCCCCTCTCTTTAATTTGG
AGACACTCCACCACAAACTTTTCACTTTAGAGGTAGCTTGCCATCTCTCAGGAGCCCTCACCATTGTGTCCATTC
ACTGTGTATAGATGGCAGAACTTTTGAGGTGCAATGTTTAATTGTTAAAAATAGTAGCCACGACTTATCAGGCA
GCCCCAAACTGGTGCATAATGCATGGTACAAGAAATATTTATGTATTTTTTGGAATTTTGTAATATTTAGTAGGA
GTATATGAAAGGATTGCTACTGTATCAGAAATATTGTTTCAATTTAGTCTATCCTGGATATGTACTAACGAATAT
TACCACCAGAGAAGAGAGCTTTCTACAAAAGTCACTACAGATTTTGCTATATTGCTTTGTAGATAGATTTTTACT
TTTGCCTAAAAGCATTTATCCTTCATACCAATTGTAACATCTGACACCATGTAGAAGCTAAAAGTTTAGAGGGAG
TGAGCGTTTTCTCAAGACCTTCCTCAAGCATTTTATCTTTAGAAGAGAAACTGATGGGCACCTGATACTCTGTCT
AAATACGTTTGTTATATGTGTTTTGCCCTGTGCCATTCATTTGGAACTTTATTGCATTCTTTATTTTAAAAAGCT
TGTTTTTACGTAATCATAGAGCTTGCTATTTGTACATCTGTTGAGCAACACTACATAACTGATTTTTAGTTGACT
TAGCTATAGCAGTACAATGATTAGTAATGTAAAAATTAACACAGAAATTAACCTAAGGAATGAAGGGTGGGTTTG
TCAAAATATCAAGTAAATTTTTGTTTCTAAAGTACATTTAATGTAGATGACCTAAAGAATGCGTTATCCATCCTA
TATAAAAGAAAGATAAAACACAGGTCACCAATTTTCTCATTTCACCCCATTTACCTTGTATAGAGGATTGTTCAT
TCCTTTGGGACTAAGTTATAGTTATGGTGAGTGTGTATTTACTGTAGTTTTGCCTGATCTCACTCATTGCACTTC
CTGGAGTTAAATTTTCCAACAGCCATGTTGAGGAATAGCACTCTGCATGTTTTTGTTTTGTTTTCGGGGTTTTT
TTTAATTGAAGCCCTAAACCAGGAATTATTTGTGTTCTAACAGGAGGATGAACTTGCTGAAAATAAAACTTTGCT
ATGTATTTACTCTTTTTTAAAAGACAAAAGCAAACCAGACTTTCTACGTACTACTCCAAAGACTGTGATTGTGA
CTATAATACATTTTTGGTAATTTTTTTATACCTAATTTGTATAGGAAGTGCTATTTCTCATAGGCTGTTTCTTGA
AATTTTAAGTTTATTGCTTTAAAATGGCAGTGTTTCTCCCACTTTGATATGCTAACATTTAGTAAGCACTGGCTT
TATGAAAGCGGCTTTTTATAAGTATACTGCATTTTTTGAGCCTATCATTAATTAGCTTAGTATGAAAGATAAGAA
AATCTCCATGTTGTATCCATTTGGCTCAGGAAGATTCTTTGCCTTACCTTTCTTAGAACTCTTTATTGCTTATCA
AAAGTTTGAGTACCCGCTTGGTTTTTTTTGGTAATTAAATATTGTATGATTTATCTGGTTCAAGGAAGATGCAC
TATTCAGTTATCTATTGAGAATTATTTTGCAGTGGTTTTAGTGGGTGAAAATGTCCCATCTGCACCAGTACACA
GGCAGGCATTATCATTCTTCACCTACTTTTTAAATAGTGGCAACTTGGGATTCTTTCTGGTGATTCTGAACCTTG
CCTCATAGCTTAAAGTATAAAAAAAGATTCAAGAGCAGTGAGGTTTGTTCTTTCCAGTGAATGGTGGACTGAGTG
GTGCGAGGTGGAGGGCTAACAAGAGGAAAGAACTACATTCTTCAGAATACAGTGATGAAAATTCATTTTGAAACT
CAAATATTTTCATTTTGGATATTCTCCTGTTTTTATTAAACCAGTGATTACACCTGGCCATCCCTCTAAATGTTC
TAGGAAGGCATGTCTATTGTGATTTTGATGAAGACAGAATTATTTTTCTCTGTAGAAACACAGATACCACTTTAT
CAGGGAAGTTAGTCAAATGAAATGGAAATTGGTAAATGGACAAAGCTAGCTAGTAAAAGGACGACCCAGCAAC
ATGCTTTAACCCCATTGTATGTTTGTGGAAAGAGCATAGTTTAACATCTTGAGAAATTTGGGACATAAAGTTTTC
ATGGTAGACAGTTCATGCAGTATATGAATTGACATAATGGAAATAATCTGATTTTATTTTTACAACTAACATCCA
TTCCCCTTCATTTAAACACCTTTTGTGTTTTACTTCAGTGAGGAGATTGGAGTCTGAATGGATCTGTTTTCCAAG
AGATTCTGAGAAATTTTTGTATTCAGCAGTTGGAAAGCTCTCTATTCTAGTTGATAAAACTTCCCTTTTTTGATG

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FIGURE 326B

TAGATGCAGATATTCTATACAGTTCTGTTGTCTTTTACTAGGACTGTAAACTTTTGTGATAAAATTCAAATAAGA
TTTTATTTCTTTGTAATTTTGGCTTTCACAATTTATCTTTAAATCCTTGAGCAATCTGTATACAATTAAGAGATT
TCTGACATTTATTCTTACACTAAATGGATCAACTCTAGGATTTAGGCATGTTAACTTCTGTTGTGTTTTGAATCT
CTCCAGAGTTGCATGTAGATAGCATTTATTTCTGTGCCCTTAAACCCATTTAGAAAATAACTACAAAGTAAAAAT
GTAGAGGAAATAGAAATGTATTTTTTCATGAACATTTTGATACAAATTTCATCATTTAATGATTCACCAATTTCT
TGCATTAATTTGAATTTAAGCATTTAATTCAAAGAGAGGGGAGCATCCATTATTGGTACATGTGGGCTTTTAAAA
ACTCCATCCTTTATAAATAGTCAAGGTTTGGGCCACACAAAGTATATTTTTATCATGGAAAAATTTCAACTCCTC
AAGCCGTAATGTTGAACAGAATTGGAGTATTTTCTTTATAATTTCTTGAACAGGCAAATGAAAGCTTATTATAGA
ATGCATGTATTTTCTTTTATCTTTGGAACATCAGCACCAGTATATTGCTGGCAGCTATTGTATTAAAAAATAAAG
TATATTTTCACTATCAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 327

MALSMPLNGLKEEDKEPLIELFVKAGSDGESIGNCPFSQRLFMILWLKGVVFSVTTVDLKRKPADLQNLAPGTHP
PFITFNSEVKTDVNKIEEFLEEVLCPPKYLKLSPKHPESNTAGMDIFAKFSAYIKNSRPEANEALERGLLKTLQK
LDEYLNSPLPDEIDENSMEDIKFSTRKFLDGNEMTLADCNLLPKLHIVKVVAKKYRNFDIPKEMTGIWRYLTNAY
SRDEFTNTCPSDKEVEIAYSDVAKRLTK

FIGURE 328

TGCTGCGAACCACGTGGGTCCCGGGCGCGTTTCGGGTGCTGGCGGCTGCAGCCGGAGTTCAAACCTAAGCAGCTG
GAAGGAACC**ATG**GCCAACTGTGAGCGTACCTTCATTGCGATCAAACCAGATGGGGTCCAGCGGGGTCTTGTGGGA
GAGATTATCAAGCGTTTTGAGCAGAAAGGATTCCGCCTTGTTGGTCTGAAATTCATGCAAGCTTCCGAAGATCTT
CTCAAGGAACACTACGTTGACCTGAAGGACCGTCCATTCTTTGCCGGCCTGGTGAAATACATGCACTCAGGGCCG
GTAGTTGCCATGGTCTGGGAGGGGCTGAATGTGGTGAAGACGGGCCGAGTCATGCTCGGGGAGACCAACCCTGCA
GACTCCAAGCCTGGGACCATCCGTGGAGACTTCTGCATACAAGTTGGCAGGAACATTATACATGGCAGTGATTCT
GTGGAGAGTGCAGAGAAGGAGATCGGCTTGTGGTTTCACCCTGAGGAACTGGTAGATTACACGAGCTGTGCTCAG
AACTGGATCTATGAA**TGA**CAGGAGGGCAGACCACATTGCTTTTCACATCCATTTCCCCTCCTTCCATGGGCAGA
GGACCAGGCTGTAGGAAATCTAGTTATTTACAGGAACTTCATCATAATTTGGAGGGAAGCTCTTGGAGCTGTGAG
TTCTCCCTGTACAGTGTTACCATCCCCGACCATCTGATTAAAATGCTTCCTCCCAGC

FIGURE 329

MANCERTFIAIKPDGVQRGLVGEIIKRFEQKGFRLVGLKFMQASEDLLKEHYVDLKDRPFFAGLVKYMHSGPVVA
MVWEGLNVVKTGRVMLGETNPADSKPGTIRGDFCIQVGRNIIHGSDSVESAEKEIGLWFHPEELVDYTSCAQNWI
YE

FIGURE 330A

GCGGCGGTGGCGGCGGAGACCCGAAC**ATG**GCGACCGCGCGCACCTTCGGGCCCGAGCGGGAAGCCGAGCCGGCCA
AGGAAGCGCGCGTCGTGGGCTCGGAGCTTGTGGACACTTATACGGTTTACATCATCCAGGTCACTGATGGCAGCC
ATGAGTGGACAGTAAAGCACCGCTACAGCGACTTCCATGACCTGCATGAAAAGCTCGTTGCAGAGAGAAAGATTG
ATAAAAACCTGCTTCCGCCCAAAAAGATAATTGGGAAAAACTCAAGAAGCTTGGTGGAGAAGAGGGAGAAGGATC
TGGAGGTCTACCTCCAGAAGCTCCTGGCTGCCTTCCCTGGCGTGACCCCCAGAGTACTGGCCCACTTCTTGCATT
TTCACTTCTATGAGATAAATGGCATCACCGCGGCACTGGCTGAAGAGCTCTTTGAGAAAGGAGAACAGCTCCTGG
GGGCCGGCGAGGTCTTTGCCATTGGACCCCTGCAGCTGTATGCCGTCACGGAGCAGCTGCAGCAGGGAAAGCCCA
CGTGCGCCAGTGGGGATGCCAAGACCGACCTCGGGCACATCCTGGACTTCACCTGTCGCCTTAAGTACCTTAAGG
TTTCTGGCACAGAAGGACCTTTTGGGACCAGCAACATTCAGGAGCAGCTCCTGCCGTTCGACCTATCAATATTCA
AGTCCCTGCATCAGGTGGAGATAAGTCACTGTGATGCTAAGCACATCAGAGGGCTGGTCGCATCGAAGCCCACCT
TAGCCACGCTGAGTGTCCGCTTCTCAGCAACCTCGATGAAGGAAGTCCTTGTTCCTGAAGCCTCAGAATTTGATG
AGTGGGAGCCTGAAGGCACAACCCTAGAAGGCCCTGTGACTGCCGTCATCCCCACTTGGCAGGCATTGACCACGC
TTGACCTGAGCCACAACAGCATCTCCGAGATCGACGAGTCTGTGAAACTGATCCCAAAGATTGAGTTCCTGGACC
TGAGTCACAATGGATTGCTGGTTGTGGACAATCTGCAGCACCTGTATAACCTTGTGCATCTGGACCTGTCCTACA
ACAAGCTCTCCTCCTTGGAAGGGCTTCACACCAAGCTGGGGAACATCAAGACCTTAAACCTGGCAGGCAACCTCC
TAGAGAGTCTGAGTGGCCTGCACAAGCTCTACTCACTGGTCAACCTGGATCTCCGGGACAACAGGATCGAACAGA
TGGAGGAGGTCCGGAGCATAGGCAGCCTCCCGTGTCTGGAGCACGTGTCTCTGCTGAACAACCCTCTGAGCATCA
TCCCCGACTACCGGACCAAGGTGCTGGCTCAGTTCGGAGAGAGGGCCTCAGAGGTCTGTCTGGATGACACAGTGA
CCACAGAGAAGGAGCTGGACACTGTGGAAGTGCTGAAAGCAATTCAGAAAGCCAAGGAGGTCAAGTCCAAACTGA
GCAACCCAGAGAAGAAGGGTGGTGAAGACTCCCGGCTCTCAGCTGCCCCCTGCATCAGACCCAGCAGCTCCCCTC
CCACTGTGGCTCCCGCATCTGCCTCCCTGCCCCAGCCCATCCTCTCTAACCAAGGAATCATGTTCGTTCAGGAGG
AGGCCCTGGCCAGCAGCCTCTCGTCCACTGACAGTCTGACTCCCGAGCACCAGCCCATTGCCCAGGGATGTTCTG
ATTCCTTGGAGTCCATCCCTGCGGGACAGGCAGCTTCCGATGATTTAAGGGACGTGCCAGGAGCTGTTGGTGGTG
CAAGCCCAGAACATGCCGAGCCGGAGGTCCAGGTGGTGCCGGGGTCTGGCCAGATCATCTTCCTGCCCTTCACCT
GCATTGGCTACACGGCCACCAATCAGGACTTCATCCAGCGCCTGAGCACACTGATCCGGCAGGCCATCGAGCGGC
AGCTGCCTGCCTGGATCGAGGCTGCCAACCAGCGGGAGGAGGGCCAGGGTGAACAGGGCGAGGAGGAGGATGAGG
AGGAGGAAGAAGAGGAGGACGTGGCTGAGAACCGCTACTTTGAAATGGGGCCCCCAGACGTGGAGGAGGAGGAGG
GAGGAGGCCAGGGGGAGGAAGAGGAGGAGGAAGAGGAGGATGAAGAGGCCGAGGAGGAGCGCCTGGCTCTGGAAT
GGGCCCTGGGCGCGGACGAGGACTTCCTGCTGGAGCACATCCGCATCCTCAAGGTGCTGTGGTGCTTCCTGATCC
ATGTGCAGGGCAGTATCCGCCAGTTCGCCGCCTGCCTTGTGCTCACCGACTTCGGCATCGCAGTCTTCGAGATCC
CGCACCAGGAGTCTCGGGGCAGCAGCCAGCACATCCTCTCCTCCCTGCGCTTTGTCTTTTGCTTCCCGCATGGCG
ACCTCACCGAGTTTGGCTTCCTCATGCCGGAGCTGTGTCTGGTGCTCAAGGTACGGCACAGTGAGAACACGCTCT
TCATTATCTCGGACGCCGCCAACCTGCACGAGTTCCACGCGGACCTGCGCTCATGCTTTGCACCCCAGCACATGG
CCATGCTGTGTAGCCCCATCCTCTACGGCAGCCACACCAGCCTGCAGGAGTTCCTGCGCCAGCTGCTCACCTTCT
ACAAGGTGGCTGGCGGCTGCCAGGAGCGCAGCCAGGGCTGCTTCCCCGTCTACCTGGTCTACAGTGACAAGCGCA
TGGTGCAGACGGCCGCCGGGGACTACTCAGGCAACATCGAGTGGGCCAGCTGCACACTCTGTTCAGCCGTGCGGC
GCTCCTGCTGCGCGCCCTCTGAGGCCGTCAAGTCCGCCGCCATCCCCTACTGGCTGTTGCTCACGCCCCAGCACC
TCAACGTCATCAAGGCCGACTTCAACCCCATGCCCAACCGTGGCACCCACAACTGTCGCAACCGCAACAGCTTCA
AGCTCAGCCGTGTGCCGCTCTCCACCGTGCTGCTGGACCCCACACGCAGCTGTACCCAGCCTCGGGGCGCCTTTG
CTGATGGCCACGTGCTAGAGCTGCTCGTGGGGTACCGCTTTGTCACTGCCATCTTCGTGCTGCCCCACGAGAAGT
TCCACTTCCTGCGCGTCTACAACCAGCTGCGGGCCTCGCTGCAGGACCTGAAGACTGTGGTCATCGCCAAGACCC
CCGGGACGGGAGGCAGCCCCCAGGGCTCCTTTGCGGATGGCCAGCCTGCCGAGCGCAGGGCCAGCAATGACCAGC
GTCCCCAGGAGGTCCCAGCAGAGGCTCTGGCCCCGGCCCCAGTGGAAGTCCCAGCTCCAGCCCCTGCAGCAGCCT
CAGCCTCAGGCCCAGCGAAGACTCCGGCCCCAGCAGAGGCCTCAACTTCAGCTTTGGTCCCAGAGGAGACGCCAG
TGGAAGCTCCAGCCCCACCCCCAGCCGAGGCCCCTGCCCAGTACCCGAGTGAGCACCTCATCCAGGCCACCTCGG
AGGAGAATCAGATCCCCTCGCACTTGCCTGCCTGCCCGTCGCTCCGGCACGTCGCCAGCCTGCGGGGCAGCGCCA
TCATCGAGCTCTTCCACAGCAGCATTGCTGAGGTTGAAAACGAGGAGCTGAGGCACCTCATGTGGTCCTCGGTGG
TGTTCTACCAGACCCCAGGGCTGGAGGTGACTGCCTGCGTGCTGCTCTCCACCAAGGCTGTGTACTTTGTGCTCC

FIGURE 330B

ACGACGGCCTCCGCCGCTACTTCTCAGAGCCACTGCAGGATTTCTGGCATCAGAAAAACACCGACTACAACAACA
GCCCTTTCCACATCTCCCAGTGCTTCGTGCTAAAGCTTAGTGACCTGCAGTCAGTCAATGTGGGGCTTTTCGACC
AGCATTTCCGGCTGACGGGTTCCACCCCGATGCAGGTGGTCACGTGCTTGACGCGGGACAGCTACCTGACGCACT
GCTTCCTCCAGCACCTCATGGTCGTGCTGTCCTCTCTGGAACGCACGCCCTCGCCGGAGCCTGTTGACAAGGACT
TCTACTCCGAGTTTGGGAACAAGACCACAGGGAAGATGGAGAACTACGAGCTGATCCACTCTAGTCGCGTCAAGT
TTACCTACCCCAGTGAGGAGGAGATTGGGGACCTGACGTTCACTGTGGCCCAAAAGATGGCTGAGCCAGAGAAGG
CCCCAGCCCTCAGCATCCTGCTGTACGTGCAGGCCTTCCAGGTGGGCATGCCACCCCCTGGGTGCTGCAGGGGCC
CCCTGCGCCCCAAGACACTCCTGCTCACCAGCTCCGAGATCTTCCTCCTGGATGAGGACTGTGTCCACTACCCAC
TGCCCGAGTTTGCCAAAGAGCCGCCGCAGAGAGACAGGTACCGGCTGGACGATGGCCGCCGCGTCCGGGACCTGG
ACCGAGTGCTCATGGGCTACCAGACCTACCCGCAGGCCCTCACCCTCGTCTTCGATGACGTGCAAGGTCATGACC
TCATGGGCAGTGTCACCCTGGACCACTTTGGGGAGGTGCCAGGTGGCCCGGCTAGAGCCAGCCAGGGCCGTGAAG
TCCAGTGGCAGGTGTTTGTCCCCAGTGCTGAGAGCAGAGAGAAGCTCATCTCGCTGTTGGCTCGCCAGTGGGAGG
CCCTGTGTGGCCGTGAGCTGCCTGTCGAGCTCACCGGC**TAG**CCCAGGCCACAGCCAGCCTGTCGTGTCCAGCCTG
ACGCCTACTGGGGCAGGGCAGCAGGCTTTTGTGTTCTCTAAAAATGTTTTATCCTCCCTTTGGTACCTTAATTTG
ACTGTCCTCGCAGAGAATGTGAACATGTGTGTGTGTTGTGTTAATTCTTTCTCATGTTGGGAGTGAGAATGCCGG
GCCCCTCAGGGCTGTCGGTGTGCTGTCAGCCTCCCACAGGTGGTACAGCCGTGCACACCAGTGTCGTGTCTGCTG
TTGTGGGACCGTTGTTAACACGTGACACTGTGGGTCTGACTTTCTCTTCTACACGTCCTTTCCTGAAGTGTCGAG
TCCAGTCCTTTGTTGCTGTTGCTGTTGCTGTTGCTGTTGGCATCTTGCTGCTAATCCTGAGGCTGGTAG
CAGAATGCACATTGGAAGCTCCCACCCCATATTGTTCTTCAAAGTGGAGGTCTCCCCTGATCCAGACAAGTGGGA
GAGCCCGTGGGGGCAGGGGACCTGGAGCTGCCAGCACCAAGCGTGATTCCTGCTGCCTGTATTCTCTATTCCAAT
AAAGCAGAGTTTGACACCGTCTTAAAAAAAAA

FIGURE 331

MATARTFGPEREAEPAKEARVVGSELVDTYTVYIIQVTDGSHEWTVKHRYSDFHDLHEKLVAERKIDKNLLPPKK
IIGKNSRSLVEKREKDLEVYLQKLLAAFPGVTPRVLAHFLHFHFYEINGITAALAEELFEKGEQLLGAGEVFAIG
PLQLYAVTEQLQQGKPTCASGDAKTDLGHILDFTCRLKYLKVSGTEGPFGTSNIQEQLLPFDLSIFKSLHQVEIS
HCDAKHIRGLVASKPTLATLSVRFSATSMKEVLVPEASEFDEWEPEGTTLEGPVTAVIPTWQALTTLDLSHNSIS
EIDESVKLIPKIEFLDLSHNGLLVVDNLQHLYNLVHLDLSYNKLSSLEGLHTKLGNIKTLNLAGNLLESLSGLHK
LYSLVNLDLRDNRIEQMEEVRSIGSLPCLEHVSLLNNPLSIIPDYRTKVLAQFGERASEVCLDDTVTTEKELDTV
EVLKAIQKAKEVKSKLSNPEKKGGEDSRLSAAPCIRPSSSPPTVAPASASLPQPILSNQGIMFVQEEALASSLSS
TDSLTPEHQPIAQGCSDSLESIPAGQAASDDLRDVPGAVGGASPEHAEPEVQVVPGSGQIIFLPFTCIGYTATNQ
DFIQRLSTLIRQAIERQLPAWIEAANQREEGQGEQGEEEDEEEEEEEDVAENRYFEMGPPDVEEEEGGGQGEEEE
EEEEDEEAEEERLALEWALGADEDFLLEHIRILKVLWCFLIHVQGSIRQFAACLVLTDFGIAVFEIPHQESRGSS
QHILSSLRFVFCFPHGDLTEFGFLMPELCLVLKVRHSENTLFIISDAANLHEFHADLRSCFAPQHMAMLCSPILY
GSHTSLQEFLRQLLTFYKVAGGCQERSQGCFPVYLVYSDKRMVQTAAGDYSGNIEWASCTLCSAVRRSCCAPSEA
VKSAAIPYWLLLTPQHLNVIKADFNPMPNRGTHNCRNRNSFKLSRVPLSTVLLDPTRSCTQPRGAFADGHVLELL
VGYRFVTAIFVLPHEKFHFLRVYNQLRASLQDLKTVVIAKTPGTGGSPQGSFADGQPAERRASNDQRPQEVPAEA
LAPAPVEVPAPAPAAASASGPAKTPAPAEASTSALVPEETPVEAPAPPPAEAPAQYPSEHLIQATSEENQIPSHL
PACPSLRHVASLRGSAIIELFHSSIAEVENEELRHLMWSSVVFYQTPGLEVTACVLLSTKAVYFVLHDGLRRYFS
EPLQDFWHQKNTDYNNSPFHISQCFVLKLSDLQSVNVGLFDQHFRLTGSTPMQVVTCLTRDSYLTHCFLQHLMVV
LSSLERTPSPEPVDKDFYSEFGNKTTGKMENYELIHSSRVKFTYPSEEEIGDLTFTVAQKMAEPEKAPALSILLY
VQAFQVGMPPPGCCRGPLRPKTLLLTSSEIFLLDEDCVHYPLPEFAKEPPQRDRYRLDDGRRVRDLDRVLMGYQT
YPQALTLVFDDVQGHDLMGSVTLDHFGEVPGGPARASQGREVQWQVFVPSAESREKLISLLARQWEALCGRELPV
ELTG

FIGURE 332

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AGGCGCTGCGGCCGTCCCGGGCCGTGACTCCTCCTTTCCCCCGCCCCGCCTCCGTTCGGAGAGCCGGCGGGCGGG
CGCCTCTCGGCCAGGTACGCGGCCGGCTGGGATAGGGGTCGCGGGCGGGCTTTGGTCGCGCAGCAGCCGGTCCTC
CCCGGAGGTAGGCGGGCGCGGGCCCTGTTGGGTCTTTGGGACGCGGGTCCCGCTGGGGCCGGGGATGCTCCTCTC
TGTGAGCGCGGTCCCGTCCCCCCCTGTCCCCGGGCGGGCGCACGGGGGTCTAACCTTGGGGGGCGGCGCTCCCGC
CTGTCCCGGGTGCCGGGGTTCGCGTCCCGCGGGGCCTTCCTCGCTCTTTGTCTCTTCTGAGTGAACTTGATGACC
CCCTTCTTCCAGGAAGCGCCTCTTGGACGCGTGTGACCG**ATG**CCCAGATTGCACGACCACTTCTGGAGCTGCTCC
TGTGCGCACAGCGCGAGGCGCCGAGGCCCCCCGCGAGCCAGCACCGCGGGGCTGCCGCCCAAGGTTGGGGAGATG
ATCAACGTTTCCGTGTCCGGGCCCTCCCTGCTGGCGGCCCACGGTGCCCCGGACGCTGACCCCGCGCCCAGGGGC
CGCAGTGCTGCGATGAGCGGCCCCGAGCCCGGCAGCCCCTACCCCAACACCTGGCATCATCGCCTGTTGCAGAGG
AGCCTCGTGCTCTTCTCGGTTGGGGTGGTCCTAACCCTGGTGCTCAACCTGCTGCAGATCCAGAGGAATGTCACT
CTCTTCCCCGAGGAGGTGATCGCCACCATCTTTTCCTCCGCCTGGTGGGTCCCTCCCTGCTGCGGGACAGCAGCT
GCTGTTGTTGGCCTACTGTACCCCTGTATCGACAGTCACCTCGGAGAACCCCACAAATTTAAGAGAGAATGGGCC
AGTGTCATGCGCTGCATAGCAGGTTTTGGTGGCATTAACCACGCCAGTGCTAAATTGGATTTTGCCAATAATGTC
CAGCTGTCCTTGACTTTAGCAGCCCTATCTTTGGGCCTTTGGTGGACATTTGATCGTTCCAGAAGTGGCCTTGGG
CTGGGGATCACCATAGCTTTTCTAGCTACGCTGATCACGCAGTTTCTCGTGTATAATGGTGTCTATCAGTATACG
TCCCCAGATTTCCTCTATATTCGTTCTTGGCTCCCTTGTATATTTTTCTCAGGAGGCGTCACGGTGGGGAACATA
GGACGACAGTTAGCTATGGGTGTTCCTGAAAAGCCCCATAGTGAT**TGA**GTCTTCAAAACCACCGATTCTGAGAGC
AAGGAAGATTTTGGAAGAAAATCTGACTGTGGATTATGACAAAGATTATCTTTTTTCTTAAGTAATCTATTTAGA
TCGGGCTGACTGTACAAATGACTCCTGGAAAAAACTCGTCACCTATCTAGAAAAGTCAAGAATAGGGAGGTGGAG
AATGATGACTTACCCTGAAGTCTTCCCTTGCTACCCACACTGGCGCCTGTCTGTGCCCTGGAGCATTCTGCCCAG
CCTACGTGGGTTCAGTCAGGTGCCACCTTCCCAAGTATTCGATTTCATTCATGTGATTAAAACAAGTTGCCATAT
TTCAAAGCCTTGAGCTAAGACTCAATTACCAACCCGCAGTTTGTGTCAGTGCCCAAAGGAGGGAGGTTGATGGT
GCTTAACAAACATGAAGTATGGTGTAATAGGAATAATATTTATCCAAAAGATTTTAAAAATAGGGCTGTGTTTA
AAGAAGGAATCAAAACAAGAAAAGCAGCAGTGATTATAGAGAGGTCACACTCTAAGTGGGGTCGCGGCGTGGCCA
CGCTTCACGGTCACGCTCGTCCGTCCTGCAGTGGCGTGTTTACATGGTCACACGTGTGTGTATCACCAGTGGGTC
AACTGCTTGTCATTCCTCCCGCGGCAGTGTTGTGTAGACAATCTTACTGAGCAAAAGGCAATGAAAAGTCTTGGG
CTCCCACACTGCGATATATTGGAATTCCCACCTCAGTTTATGAAGTTTATTTCGAAATCCATAGTCATCTAAGAA
TGAATACCTGTCTGCCATGTATTTCAATCTTAGTGAGCCAAAATTGTTTGTTTGTTACTACAGAATAGAGATGAC
TGTTTTTTGGCACAGCCCTATGGAATTTGCAATCTGTGATTGCCTTGTAAAAAGGAGAGTGCATATGGCACTGCA
TTAAACGTGTGGTGTTTCTAGTCAATGATATTGGTGAGCACAATGTATTCATTTAATGGCATAGACCATACCAGA
CCTAATTTGCAAGTATTGGGTCTTCAAACTTCAAGTGCAATGTATTATGAAAACCAATCTGAGCCTTGTATCTCT
TAAATATTTATTCCTTCTAACGTGTGAGATGTCCCGAGAGAAGGGTTCTCCATTCATTTCAGTGCTGCCTGGAGG
AAACTCGGCAATGATTTCTTCAGTTGTGAAGTTCCTTTCGGGTTACAACTCCACTGGAACCCTCAACCTTCGAA
ATACTCCAGTTTTGGGGGTTGGGGCCATTTACTTATAAATTTACCGCCGGGTTTTTGGAATCTACATGTCTTGGG
GGCGGGCTCAAATTCTTCGAAAGTGGTTGGATTAAAA
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FIGURE 333

MPRLHDHFWSCSCAHSARRRGPPRASTAGLPPKVGEMINVSVSGPSLLAAHGAPDADPAPRGRSAAMSGPEPGSP
YPNTWHHRLLQRSLVLFSVGVVLTLVLNLLQIQRNVTLFPEEVIATIFSSAWWVPPCCGTAAAVVGLLYPCIDSH
LGEPHKFKREWASVMRCIAGFGGINHASAKLDFANNVQLSLTLAALSLGLWWTFDRSRSGLGLGITIAFLATLIT
QFLVYNGVYQYTSPDFLYIRSWLPCIFFSGGVTVGNIGRQLAMGVPEKPHSD

FIGURE 334A

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GGCGAGCCCGGCCCGCGAACGTCACGTCCTGCGCGCTCCCTGCACTCTCCCGAGCTGCGCTAGGCGGGCGCCACG
GCTGCCCGGCGAAGGAAACCGAAACCGAGTCCGGGCCCGTCCCTCCGCGGCCCCATCCGCCCGGTGCACCCGGGG
TCGCGCTCGCCAGGCCGCGGAGCCCAGAGCTGCGCGCACGAACCGTGCGCCGGGAGGGCGTGGGCGTGGCGCCGA
AGGGTCCCGGGTCTTCGACGCCTCTGCGGCGGCTCCTCCCTCCTTGCAGTTGGATCCCTGGCGGGTGCGGCCCGG
CCCGGCCCGTGAGCGGCGCACAGA**ATG**GGCCGATGCTGCTTCTACACGGCGGGGACGTTGTCCCTGCTCCTGCTG
GTGACCAGCGTCACGCTGCTGGTGGCCCGGGTCTTCCAGAAGGCTGTAGACCAGAGTATCGAGAAGAAAATTGTG
TTAAGGAATGGTACTGAGGCATTTGACTCCTGGGAGAAGCCCCCTCTGCCTGTGTATACTCAGTTCTATTTCTTC
AATGTCACCAATCCAGAGGAGATCCTCAGAGGGGAGACCCCTCGGGTGGAAGAAGTGGGGCCATACACCTACAGG
GAACTCAGAAACAAAGCAAATATTCAATTTGGAGATAATGGAACAACAATATCTGCTGTTAGCAACAAGGCCTAT
GTTTTTGAACGAGACCAATCTGTTGGAGACCCTAAAATTGACTTAATTAGAACATTAAATATTCCTGTATTGACT
GTCATAGAGTGGTCCCAGGTGCACTTCCTCAGGGAGATCATCGAGGCCATGTTGAAAGCCTATCAGCAGAAGCTC
TTTGTGACTCACACAGTTGACGAATTGCTCTGGGGCTACAAAGATGAAATCTTGTCCCTTATCCATGTTTTCAGG
CCCGATATCTCTCCCTATTTTGGCCTATTCTATGAGAAAAATGGGACTAATGATGGAGACTATGTTTTTCTAACT
GGAGAAGACAGTTACCTTAACTTTACAAAAATTGTGGAATGGAATGGGAAAACGTCACTTGACTGGTGGATAACA
GACAAGTGCAATATGATTAATGGAACAGATGGAGATTCTTTTCACCCACTAATAACCAAAGATGAGGTCCTTTAT
GTCTTCCCATCTGACTTTTGCAGGTCAGTGTATATTACTTTCAGTGACTATGAGAGTGTACAGGGACTGCCTGCC
TTTCGGTATAAAGTTCCTGCAGAAATATTAGCCAATACGTCAGACAATGCCGGCTTCTGTATACCTGAGGGAAAC
TGCCTGGGCTCAGGAGTTCTGAATGTCAGCATCTGCAAGAATGGTGCACCCATCATTATGTCTTTCCCACACTTT
TACCAAGCAGATGAGAGGTTTGTTTCTGCCATAGAAGGCATGCACCCAAATCAGGAAGACCATGAGACATTTGTG
GACATTAATCCTTTGACTGGAATAATCCTAAAAGCAGCCAAGAGGTTCCAAATCAACATTTATGTCAAAAAATTA
GATGACTTTGTTGAAACGGGAGACATTAGAACCATGGTTTTCCCAGTGATGTACCTCAATGAGAGTGTTCACATT
GATAAAGAGACGGCGAGTCGACTGAAGTCTATGATTAACACTACTTTGATCATCACCAACATACCCTACATCATC
ATGGCGCTGGGTGTGTTCTTTGGTTTGGTTTTTACCTGGCTTGCATGCAAAGGACAGGGATCCATGGATGAGGGA
ACAGCGGATGAAAGAGCACCCCTCATTCGAACC**TAA**ACATTGCCTTTGCTTGGTGAAGAAACTGTGTGAGCTGTC
CTGACCTGGACGATGACGTGGGGAAACCCTCCACCTCCTTGCAGGCTTGTTGCCTGTTGAAAGAAGGAAAAAGAC
ACGGCGCTGGCAAGTGATAGGAACATTCTGGCCAGAGGTTAAAGAGCAGGCTGACATGGCTGGCCATTAAGCTTT
ATAAAATCATGTGGGCTCTGAAATTGTTCTTTTATGTGTCTAGCAAGTATTTAATAAACCCTTGTATAGTAATTT
TGTTGTTGTTGGGTGCTGGTAGCTCCAGAATTTTGTGACCACTATTGTGGGTAAAATGTCTCTGCATCACTTGTT
AATGCTACTGGTCTAACTTCATTCAGTATGCTTCATTCACCGAACTTTGTGCTCAAAATGCGTATATACCATTTT
ATGTTGTATTCCTCCATTTCACTTGCAAAACAGAAGTAAATAAGAGTTCGGGACCCAGGGTAAAATGGTAGCTTC
ATCCAATATATCATTCAAATGCATCTGATTTCTAAAACATATTACATTTTATGCTGATCTTCAGTTCATAATTCT
TCCAGGAAAACTCAGTCTTCCAACTGCAATAAAATACTGGGTAGAATCAAATGGGAAAGGGGTTGGGTGGGGCAA
TACCCATGAGTTGATAGTGATAAGCTCCTAAGGATTTTTAACTTGTACTTTTGTGAACGAAGAGAATGCATAAAT
AATGTTGGTGAGGATAAAGTACAGATATTTCATGTAGAATTAATTGCTAGTTATGATGCTTGTGGATAGTTAACT
GTTTTTTTTTTAGTCAAAATGATCATGCTACGAAAGATGCTTCTGAGAGAATGTAATGAGTAACTGATTTTTCT
TCCTGAGTCGCCCTTGCCAAATATGTTACTGTATTAATTAATCTAATATTGAGTGATTATTTGTAAAATTATGAA
TATGGGAAATCCATCTATCTACAGCCTAAGTTACACATAAGTTTCAGAAAGTCTGATTAGACTAAAGAGATATTT
CTTCTGGGACAGCCGCCTTCTTGGTAATTTTGAAGTTCTTTTTACAAGTTCCTTCCTCAGTTTCAGTTCTTTCCA
GTGTTTTGTAGCTCACTGTCACTCACTGAATAGAGAAACGTGTGCCCTATACTTCCTGTGACAATCATTTTGCTG
ACAGAATGATGGATGTTTAAAATATTGCACAAAGTACTTTAAAGAAAGGTCTGTTAGGACCAGAAGCAGAGACAC
CACTTTTCAAAGGACTTCTTGGTTTCAGCATAACCTAAGACAGGGAATTGGGAGCCATCATATGTCACAGTGTTC
AGAATTCAAGCATATTTAAGGGCATTTTCTTTGATTCTCAAAGTTCAGCATTCATTTTGAATTGAGAAGCCTATA
CATTTAGCTGACAAAGTGCTTATAGAATTTCTTAACAACTGAACCATTCAAAAGGATTTTTTTTGTTTAAAACTG
GATTTCAATGTAAGCAAATGAAGAAAAAATATAGATTTCATTTCCATAGCTTCTTATCCCTGTATTGAGGTAAT
AAATTGTTTTACTGACAATTTTTCCTTTTTCTACACTAAAACAATATGTGATATATTTCCCTCTTGAAGAGGCA
ATTCATTAAACTCTCAAATTTTCTATAGAATCAAGATAGAACCTTTAGATACTCCAACTCACCAAAATGTAAAAA
AACTAACAAAAATATTTGGTCTTCAATAATGCTAAATATCTACATTTTTAGAATTTATCAACATTTAACTAGATA
ATTGGGCATGTCTTAATTATGCATGTACTTATCCATACTAATAAAATTGACAATGCTAGTGCATACTTATTGGTT
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FIGURE 334B

TAGTCCTATTATCAGGATATAATCATCTGTGAGGAGGATATTTTAAATACTGTAAATGATAACAGTTAATGATAT
ACACATTTAGACTGAGTTGCACACTGGCAGGGAGACCAAAAACATTACTTCCATACTTGTGTCATGATTCTTTTT
TTTTTGAGAGAGTCTCACTCTGTCGCCAGGCTGGAGTACAG

FIGURE 335

MGRCCFYTAGTLSLLLLVTSVTLLVARVFQKAVDQSIEKKIVLRNGTEAFDSWEKPPLPVYTQFYFFNVTNPEEI
LRGETPRVEEVGPYTYRELRNKANIQFGDNGTTISAVSNKAYVFERDQSVGDPKIDLIRTLNIPVLTVIEWSQVH
FLREIIEAMLKAYQQKLFVTHTVDELLWGYKDEILSLIHVFRPDISPYFGLFYEKNGTNDGDYVFLTGEDSYLNF
TKIVEWNGKTSLDWWITDKCNMINGTDGDSFHPLITKDEVLYVFPSDFCRSVYITFSDYESVQGLPAFRYKVPAE
ILANTSDNAGFCIPEGNCLGSGVLNVSICKNGAPIIMSFPHFYQADERFVSAIEGMHPNQEDHETFVDINPLTGI
ILKAAKRFQINIYVKKLDDFVETGDIRTMVFPVMYLNESVHIDKETASRLKSMINTTLIITNIPYIIMALGVFFG
LVFTWLACKGQGSMDEGTADERAPLIRT

FIGURE 336A

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GCGCGACCGTCCCGGGGGTGGGGCCGGGCGCAGCGGCGAGAGGAGGCGAAGGTGGCTGCGGTAGCAGCAGCGCGG
CAGCCTCGGACCCAGCCCGGAGCGCAGGGCGGCCGCTGCAGGTCCCCGCTCCCCTCCCCGTGCGTCCGCCCATGG
CCGCCGCCGGGCAGCTGTGCTTGCTCTACCTGTCGGCGGGGCTCCTGTCCCGGCTCGGCGCAGCCTTCAACTTGG
ACACTCGGGAGGACAACGTGATCCGGAAATATGGAGACCCCGGGAGCCTCTTCGGCTTCTCGCTGGCCATGCACT
GGCAACTGCAGCCCGAGGACAAGCGGCTGTTGCTCGTGGGGGCCCCGCGCGGAGAAGCGCTTCCACTGCAGAGAG
CCAACAGAACGGGAGGGCTGTACAGCTGCGACATCACCGCCCGGGGGCCATGCACGCGGATCGAGTTTGATAACG
ATGCTGACCCCACGTCAGAAAGCAAGGAAGATCAGTGGATGGGGGTCACCGTCCAGAGCCAAGGTCCAGGGGGCA
AGGTCGTGACATGTGCTCACCGATATGAAAAAAGGCAGCATGTTAATACGAAGCAGGAATCCCGAGACATCTTTG
GGCGGTGTTATGTCCTGAGTCAGAATCTCAGGATTGAAGACGATATGGATGGGGGAGATTGGAGCTTTTGTGATG
GGCGATTGAGAGGCCATGAGAAATTTGGCTCTTGCCAGCAAGGTGTAGCAGCTACTTTTACTAAAGACTTTCATT
ACATTGTATTTGGAGCCCCGGGTACTTATAACTGGAAAGGGATTGTTCGTGTAGAGCAAAAGAATAACACTTTTT
TTGACATGAACATCTTTGAAGATGGGCCTTATGAAGTTGGTGGAGAGACTGAGCATGATGAAAGTCTCGTTCCTG
TTCCTGCTAACAGTTACTTAGGTTTTTCTTTGGACTCAGGGAAAGGTATTGTTTCTAAAGATGAGATCACTTTTG
TATCTGGTGCTCCCAGAGCCAATCACAGTGGAGCCGTGGTTTTGCTGAAGAGAGACATGAAGTCTGCACATCTCC
TCCCTGAGCACATATTCGATGGAGAAGGTCTGGCCTCTTCATTTGGCTATGATGTGGCGGTGGTGGACCTCAACA
AGGATGGGTGGCAAGATATAGTTATTGGAGCCCCACAGTATTTTGATAGAGATGGAGAAGTTGGAGGTGCAGTGT
ATGTCTACATGAACCAGCAAGGCAGATGGAATAATGTGAAGCCAATTCGTCTTAATGGAACCAAAGATTCTATGT
TTGGCATTGCAGTAAAAAATATTGGAGATATTAATCAAGATGGCTACCCAGATATTGCAGTTGGAGCTCCGTATG
ATGACTTGGGAAAGGTTTTTATCTATCATGGATCTGCAAATGGAATAAATACCAAACCAACACAGGTTCTCAAGG
GTATATCACCTTATTTTGGATATTCAATTGCTGGAAACATGGACCTTGATCGAAATTCCTACCCTGATGTTGCTG
TTGGTTCCCTCTCAGATTCAGTAACTATTTTCAGATCCCGGCCTGTGATTAATATTCAGAAAACCATCACAGTAA
CTCCTAACAGAATTGACCTCCGCCAGAAAACAGCGTGTGGGGCGCCTAGTGGGATATGCCTCCAGGTTAAATCCT
GTTTTGAATATACTGCTAACCCCGCTGGTTATAATCCTTCAATATCAATTGTGGGCACACTTGAAGCTGAAAAAG
AAAGAAGAAATCTGGGCTATCCTCAAGAGTTCAGTTTCGAAACCAAGGTTCTGAGCCCAAATATACTCAAGAAC
TAACTCTGAAGAGGCAGAAACAGAAAGTGTGCATGGAGGAAACCCTGTGGCTACAGGATAATATCAGAGATAAAC
TGCGTCCCATTCCCATAACTGCCTCAGTGGAGATCCAAGAGCCAAGCTCTCGTAGGCGAGTGAATTCACTTCCAG
AAGTTCTTCCAATTCTGAATTCAGATGAACCCAAGACAGCTCATATTGATGTTCACTTCTTAAAAGAGGGATGTG
GAGACGACAATGTATGTAACAGCAACCTTAAACTAGAATATAAATTTTGCACCCGAGAAGGAAATCAAGACAAAT
TTTCTTATTTACCAATTCAAAAAGGTGTACCAGAACTAGTTCTAAAAGATCAGAAGGATATTGCTTTAGAAATAA
CAGTGACAAACAGCCCTTCCAACCCAAGGAATCCCACAAAAGATGGCGATGACGCCCATGAGGCTAAACTGATTG
CAACGTTTCCAGACACTTTAACCTATTCTGCATATAGAGAACTGAGGGCTTTCCCTGAGAAACAGTTGAGTTGTG
TTGCCAACCAGAATGGCTCGCAAGCTGACTGTGAGCTCGGAAATCCTTTTAAAAGAAATTCAAATGTCACTTTTT
ATTTGGTTTTAAGTACAACTGAAGTCACCTTTGACACCCCATATCTGGATATTAATCTGAAGTTAGAAACAACAA
GCAATCAAGATAATTTGGCTCCAATTACAGCTAAAGCAAAGTGGTTATTGAACTGCTTTATCGGTCTCGGGAG
TTGCTAAACCTTCCCAGGTGTATTTTGGAGGTACAGTTGTTGGCGAGCAAGCTATGAAATCTGAAGATGAAGTGG
GAAGTTTAATAGAGTATGAATTCAGGGTAATAAACTTAGGTAAACCTCTTACAAACCTCGGCACAGCAACCTTGA
ACATTCAGTGGCCAAAAGAAATTAGCAATGGGAAATGGTTGCTTTATTTGGTGAAAGTAGAATCCAAAGGATTGG
AAAAGGTAACTTGTGAGCCACAAAAGGAGATAAACTCCCTGAACCTAACGGAGTCTCACAACTCAAGAAAGAAAC
GGGAAATTACTGAAAAACAGATAGATGATAACAGAAAATTTCTTTATTTGCTGAAAGAAAATACCAGACTCTTA
ACTGTAGCGTGAACGTGAACTGTGTGAACATCAGATGCCCGCTGCGGGGCTGGACAGCAAGGCGTCTCTTATTT
TGCGCTCGAGGTTATGGAACAGCACATTTCTAGAGGAATATTCCAAACTGAACTACTTGGACATTCTCATGCGAG
CCTTCATTGATGTGACTGCTGCTGCCGAAAATATCAGGCTGCCAAATGCAGGCACTCAGGTTCGAGTGACTGTGT
TTCCCTCAAAGACTGTAGCTCAGTATTCGGGAGTACCTTGGTGGATCATCCTAGTGGCTATTCTCGCTGGGATCT
TGATGCTTGCTTTATTAGTGTTTATACTATGGAAGTGTGGTTTCTTCAAGAGAAATAAGAAAGATCATTATGATG
CCACATATCACAAGGCTGAGATCCATGCTCAGCCATCTGATAAAGAGAGGCTTACTTCTGATGCATAGTATTGAT
CTACTTCTGTAATTGTGTGGATTCTTTAAACGCTCTAGGTACGATGACAGTGTTCCCCGATACCATGCTGTAAGG
ATCCGGAAAGAAGAGCGAGAGATCAAAGATGAAAGTATATTGATAACCTTGAAAAAAAACAGTGGATCACAAAG
TGGAACAGAAATGAAAGCTACTCATAGCGGGGGCCTAAAAAAAAAAAAAGCTTCACAGTACCCAAACTGCTTTTTC
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FIGURE 336B

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CAACTCAGAAATTCAATTTGGATTTAAAAGCCTGCTCAATCCCTGAGGACTGATTTCAGAGTGACTACACACAGT
ACGAACCTACAGTTTTAACTGTGGATATTGTTACGTAGCCTAAGGCTCCTGTTTTGCACAGCCAAATTTAAAACT
GTTGGAATGGATTTTTCTTTAACTGCCGTAATTTAACTTTCTGGGTTGCCTTTGTTTTTGGCGTGGCTGACTTAC
ATCATGTGTTGGGGAAGGGCCTGCCCAGTTGCACTCAGGTGACATCCTCCAGATAGTGTAGCTGAGGAGGCACCT
ACACTCACCTGCACTAACAGAGTGGCCGTCCTAACCTCGGGCCTGCTGCGCAGACGTCCATCACGTTAGCTGTCC
CACATCACAAGACTATGCCATTGGGGTAGTTGTGTTTCAACGGAAAGTGCTGTCTTAAACTAAATGTGCAATAGA
AGGTGATGTTGCCATCCTACCGTCTTTTCCTGTTTCCTAGCTGTGTGAATACCTGCTCACGTCAAATGCATACAA
GTTTCATTCTCCCTTTCACTAAAAACACACAGGTGCAACAGACTTGAATGCTAGTTATACTTATTTGTATATGGT
ATTTATTTTTTCTTTTCTTTACAAACCATTTTGTTATTGACTAACAGGCCAAAGAGTCTCCAGTTTACCCTTCAG
GTTGGTTTAATCAATCAGAATTAGAATTAGAGCATGGGAGGGTCATCACTATGACCTAAATTATTTACTGCAAAA
AGAAAATCTTTATAAATGTACCAGAGAGAGTTGTTTTAATAACTTATCTATAAACTATAACCTCTCCTTCATGAC
AGCCTCCACCCCACAACCCAAAAGGTTTAAGAAATAGAATTATAACTGTAAAGATGTTTATTTCAGGCATTGGAT
ATTTTTTACTTTAGAAGCCTGCATAATGTTTCTGGATTTACATACTGTAACATTCAGGAATTCTTGGAGAAGATG
GGTTTATTCACTGAACTCTAGTGCGGTTTACTCACTGCTGCAAATACTGTATATTCAGGACTTGAAAGAAATGGT
GAATGCCTATGGAACTAGTGGATCCAAACTGATCCAGTATAAGACTACTGAATCTGCTACCAAAACAGTTAATCA
GTGAGTCGAGTGTTCTATTTTTGTTTGTTTCCTCCCCTATCTGTATTCCCAAAAATTACTTTGGGGCTAATTT
AACAAGAACTTTAAATTGTGTTTTAATTGTAAAAATGGCAGGGGGTGGAATTATTACTCTATACATTCAACAGAG
ACTGAATAGATATGAAAGCTGATTTTTTTTAATTACCATGCTTCACAATGTTAAGTTATATGGGGAGCAACAGCA
AACAGGTGCTAATTTGTTTTGGATATAGTATAAGCAGTGTCTGTGTTTTGAAAGAATAGAACACAGTTTGTAGTG
CCACTGTTGTTTTGGGGGGGGCTTTTTTTCTTTTTCCGGAAAATCCTTAAACCTTAAGATACTAAGGACGTTGTT
TTGGTTGTACTTGGAATTCTTAGTCACAAAATATATTTTGTTACAAAAATTTCTGTAAAACAGGTTATAACAGT
GTTTAAAGTCTCAGTTTCTTGCTTGGGGAACTTGTGTCCCTAATGTGTTAGATTGCTAGATTGCTAAGGAGCTGA
TACTTGACAGTTTTTTAGACCTGTGTTACTAAAAAAAAGATGAATGTCGGAAAAGGGTGTTGGGAGGGTGGTCAA
CAAAGAAACAAAGATGTTATGGTGTTTAGACTTATGGTTGTTAAAAATGTCATCTCAAGTCAAGTCACTGGTCTG
TTTGCATTTGATACATTTTTGTACTAACTAGCATTGTAAAATTATTTCATGATTAGAAATTACCTGTGGATATTT
GTATAAAGTGTGAAATAAATTTTTTATAAAGTGTTCATTGTTTCGTAACACAGCATTGTATATGTGAAGCAAA
CTCTAAAATTATAAATGACAACCTGAATTATCTATTTCATCAAAAAAAAAAAAAAAAAAAA
```

FIGURE 337

MAAAGQLCLLYLSAGLLSRLGAAFNLDTREDNVIRKYGDPGSLFGFSLAMHWQLQPEDKRLLLVGAPRGEALPLQ
RANRTGGLYSCDITARGPCTRIEFDNDADPTSESKEDQWMGVTVQSQGPGGKVVTCAHRYEKRQHVNTKQESRDI
FGRCYVLSQNLRIEDDMDGGDWSFCDGRLRGHEKFGSCQQGVAATFTKDFHYIVFGAPGTYNWKGIVRVEQKNNT
FFDMNIFEDGPYEVGGETEHDESLVPVPANSYLGFSLDSGKGIVSKDEITFVSGAPRANHSGAVVLLKRDMKSAH
LLPEHIFDGEGLASSFGYDVAVVDLNKDGWQDIVIGAPQYFDRDGEVGGAVYVYMNQQGRWNNVKPIRLNGTKDS
MFGIAVKNIGDINQDGYPDIAVGAPYDDLGKVFIYHGSANGINTKPTQVLKGISPYFGYSIAGNMDLDRNSYPDV
AVGSLSDSVTIFRSRPVINIQKTITVTPNRIDLRQKTACGAPSGICLQVKSCFEYTANPAGYNPSISIVGTLEAE
KERRKSGLSSRVQFRNQGSEPKYTQELTLKRQKQKVCMEETLWLQDNIRDKLRPIPITASVEIQEPSSRRRVNSL
PEVLPILNSDEPKTAHIDVHFLKEGCGDDNVCNSNLKLEYKFCTREGNQDKFSYLPIQKGVPELVLKDQKDIALE
ITVTNSPSNPRNPTKDGDDAHEAKLIATFPDTLTYSAYRELRAFPEKQLSCVANQNGSQADCELGNPFKRNSNVT
FYLVLSTTEVTFDTPYLDINLKLETTSNQDNLAPITAKAKVVIELLLSVSGVAKPSQVYFGGTVVGEQAMKSEDE
VGSLIEYEFRVINLGKPLTNLGTATLNIQWPKEISNGKWLLYLVKVESKGLEKVTCEPQKEINSLNLTESHNSRK
KREITEKQIDDNRKFSLFAERKYQTLNCSVNVNCVNIRCPLRGLDSKASLILRSRLWNSTFLEEYSKLNYLDILM
RAFIDVTAAAENIRLPNAGTQVRVTVFPSKTVAQYSGVPWWIILVAILAGILMLALLVFILWKCGFFKRNKKDHY
DATYHKAEIHAQPSDKERLTSDA

FIGURE 338

GGGGGAAGTTGCTGGCTGACTGGGCTTGCGAGGAAACCGCCTCGGAGCTGCAGCGAAGGCCAAGGAATCACTGAA
GATCGGCGAGGGAGGACAGGGGGTTCATC**ATG**GGTGGCTTTTTCTCAAGTATATTTTCCAGTCTGTTTGGAACTC
GGGAAATGAGAATTTTAATTTTGGGATTAGATGGAGCAGGAAAAACCACAATTTTGTACAGATTACAAGTGGGAG
AAGTTGTTACTACTATACCTACCATTGGATTTAATGTAGAGACGGTGACGTACAAAAACCTTAAATTCCAAGTCT
GGGATTTAGGAGGACAGACAAGTATCAGGCCATACTGGAGATGTTACTATTCAAACACAGATGCAGTCATTTATG
TAGTAGACAGTTGTGACCGAGACCGAATTGGCATTTCCAAATCAGAGTTAGTTGCCATGTTGGAGGAAGAAGAGC
TGAGAAAAGCCATTTTAGTGGTGTTTGCAAATAAACAGGACATGGAACAGGCCATGACTTCCTCAGAGATGGCAA
ATTCACTTGGGTTACCTGCCTTGAAGGACCGAAAATGGCAGATATTCAAAACGTCAGCAACCAAAGGCACCGGCC
TTGATGAGGCAATGGAATGGTTAGTTGAAACATTAAAAAGCAGACAG**TAA**TTCAGTCCATTCTTCTCCCCTGAAA
TGAAGACTACATCACCTCTCTCCCTTTGGAAACAGTCAAGTGTACTTCACACTACTAGATGTTAAAACTATATGA
TTATTGGCATATACTGACTGACTGCAATATTTGTAGTAAATAGGGAAAATAAGTATTTAGTTGGAGGGATAATTT
GATCGAATCACCTGAATGTTCTATGTAATGTAAAATATTCTTTTCTTGCTTTCTTGTGTTAAGGTATATATTCTA
TTTGTATGGAATTCTTATTCAAATACAGTTGTATTAAAGAGTATACTCCATTGGATGAAAAAACCT

FIGURE 339

MGGFFSSIFSSLFGTREMRILILGLDGAGKTTILYRLQVGEVVTTIPTIGFNVETVTYKNLKFQVWDLGGQTSIR
PYWRCYYSNTDAVIYVVDSCDRDRIGISKSELVAMLEEEELRKAILVVFANKQDMEQAMTSSEMANSLGLPALKD
RKWQIFKTSATKGTGLDEAMEWLVETLKSRQ

FIGURE 340A

GAATTCGTTGTTGGGAAGGACTGGGGAAACAGCTGTAACATTTGCCACCCTCAGAAGCTGCTGGTCCTGTGTCAC
ACCACCTTAGCCTCTTGATCGAGGAAGATTCTCGCTGAAGTCTGTTAATTCTACTTTTTGAGTACTT**ATG**AATAA
CCACGTGTCTTCAAAACCATCTACCATGAAGCTAAAACATACCATCAACCCTATTCTTTTATATTTTATACATTT
TCTAATATCACTTTATACTATTTTAACATACATTCCGTTTTATTTTTTCTCCGAGTCAAGACAAGAAAAATCAAA
CCGAATTAAAGCAAAGCCTGTAAATTCAAAACCTGATTCTGCATACAGATCTGTTAATAGTTTGGATGGTTTGGC
TTCAGTATTATACCCTGGATGTGATACTTTAGATAAAGTTTTTACATATGCAAAAAACAAATTTAAGAACAAAAG
ACTCTTGGGAACACGTGAAGTTTTAAATGAGGAAGATGAAGTACAACCAAATGGAAAAATTTTTAAAAAGGTTAT
TCTTGGACAGTATAATTGGCTTTCCTATGAAGATGTCTTTGTTCGAGCCTTTAATTTTGGAAATGGATTACAGAT
GTTGGGTCAGAAACCAAAGACCAACATCGCCATCTTCTGTGAGACCAGGGCCGAGTGGATGATAGCTGCACAGGC
GTGTTTTATGTATAATTTTCAGCTTGTTACATTATATGCCACTCTAGGAGGTCCAGCCATTGTTCATGCATTAAA
TGAAACAGAGGTGACCAACATCATTACTAGTAAAGAACTCTTACAAACAAAGTTGAAGGATATAGTTTCTTTGGT
CCCACGCCTGCGGCACATCATCACTGTTGATGGAAAGCCACCGACCTGGTCCGACTTCCCCAAGGGCATCATTGT
GCATACCATGGCTGCAGTGGAGGCCCTGGGAGCCAAGGCCAGCATGGAAAACCAACCTCATAGCAAACCATTGCC
CTCAGATATTGCAGTAATCATGTACACAAGTGGATCCACAGGACTTCCAAAGGGAGTCATGATCTCACATAGTAA
CATTATTGCTGGTATAACTGGGATGGCAGAAAGGATTCCAGAACTAGGAGAGGAAGATGTCTACATTGGATATTT
GCCTCTGGCCCATGTTCTAGAATTAAGTGCTGAGCTTGTCTGTCTTTCTCACGGATGCCGCATTGGTTACTCTTC
ACCACAGACTTTAGCAGATCAGTCTTCAAAAATTAAAAAAGGAAGCAAAGGGGATACATCCATGTTGAAACCAAC
ACTGATGGCAGCAGTTCCGGAAATCATGGATCGGATCTACAAAAATGTCATGAATAAAGTCAGTGAAATGAGTAG
TTTTCAACGTAATCTGTTTATTCTGGCCTATAATTACAAAATGGAACAGATTTCAAAAGGACGTAATACTCCACT
GTGCGACAGCTTTGTTTTCCGGAAAGTTCGAAGCTTGCTAGGGGGAAATATTCGTCTCCTGTTGTGTGGTGGCGC
TCCACTTTCTGCAACCACGCAGCGATTCATGAACATCTGTTTCTGCTGTCCTGTTGGTCAGGGATACGGGCTCAC
TGAATCTGCTGGGGCTGGAACAATTTCCGAAGTGTGGGACTACAATACTGGCAGAGTGGGAGCACCATTAGTTTG
CTGTGAAATCAAATTAAAAAAACTGGGAGGAAGGTGGATACTTTAATACTGATAAGCCACACCCCAGGGGTGAAAT
TCTTATTGGGGGCCAAAGTGTGACAATGGGGTACTACAAAAATGAAGCAAAAACAAAAGCTGATTTCTCTGAAGA
TGAAAATGGACAAAGGTGGCTCTGTACTGGGGATATTGGAGAGTTTGAACCCGATGGATGCTTAAAGATTATTGA
TCGTAAAAAGGACCTTGTAAAACTACAGGCAGGGGAATATGTTTCTCTTGGGAAAGTAGAGGCAGCTTTGAAGAA
TCTTCCACTAGTAGATAACATTTGTGCATATGCAAACAGTTATCATTCTTATGTCATTGGATTTGTTGTGCCAAA
TCAAAAGGAACTAACTGAACTAGCTCGAAAGAAAGGACTTAAAGGGACTTGGGAGGAGCTGTGTAACAGTTGTGA
AATGGAAAATGAGGTACTTAAAGTGCTTTCCGAAGCTGCTATTTCAGCAAGTCTGGAAAAGTTTGAAATTCCAGT
AAAAATTCGTTTGAGTCCTGAACCGTGGACCCCTGAAACTGGTCTGGTGACAGATGCCTTCAAGCTGAAACGCAA
AGAGCTTAAAACACATTACCAGGCGGACATTGAGCGAATGTATGGAAGAAAA**TAA**TTATTCTCTTCTGGCATCAG
TTTGCTACAGTGAGCTCACATCAAATAGGAAAATACTTGAAATGCATGTCTCAAGCTGCAAGGCAAACTCCATTC
CTCATATTAAACTATTACTTCTCATGACGTCACCATTTTTAACTGACAGGATTAGTAAAACATTAAGACAGCAAA
CTTGTGTCTGTCTCTTCTTTCATTTTCCCCGCCACCAACTTACTTTACCACCTATGACTGTACTTGTCAGTATGA
GAATTTTTCTGAATCATATTGGGGAAGCAGTGATTTTAAAACCTCAAGTTTTTAAACATGATTTATATGTTCTGT
ATAATGTTCAGTTTGTAACTTTTTAAAAGTTTGGATGTATAGAGGGATAAATAGGAAATATAAGAATTGGTTATT
TGGGGGCTTTTTTACTTACTGTATTTAAAAATACAAGGGTATTGATATGAAATTATGTAAATTTCAAATGCTTAT
GAATCAAATCATTGTTGAACAAAGATTTGTTGCTGTGTAATTATTGTCTTGTATGCATTTGAGAGAAATAAATA
TACCCATACTTATGTTTTAAGAAGTTGAGATCTTGTGAATATATGCCTGTCAGTGTCTTCTTTATATTTATTT
TTTATTAGAAAAAATGAAGTTTGGTTGGTGATGCATGAAACAAAATAGCAAGAGAGGGTTATAGTTTAATAGTAA
GGGAGATAACACAGCATGTGTAGCACCAGTTGATAATGGTCTCTAGTAGCTTACTGTCAAAATGTTCAATGAAG
TCTTCTGTTCATCTGTTGAAACTAGGAAAATACCCAAACTTAAATGGAAGAATTCTGAAAGAGAGGATAGAATTT
AAAGAACAAGAGTATATAAAGTTATTCTTTGAATATTTCGTTGACTATATGTACATTGAGTTATCTATATTTGTA
AACAAATTAGTCATGGAAAATTATTCTATTCCAAAGTCTCCTTTTAGTCTAGATAATCATTATTTCATTTTAAAA
TTAGTGTTTTTCATAGTTTGCACTGATGCGTGTATGGATGTGTGTGAGTCAGTGGTAGCTTATTTAAAAAGCACC
TTATCCTTTCTCCCATAACCTTTGTACACTAAAAAATGAAAGAATTTAGAATGTATTTGATGATAGCATTCTCAC
TAAGACACATGAGAATTTAACTTTATAACCGCGTGAGTTAAGATTTAATTCATAGGTTTTGATGTCATTGTTGAA
GTTATTTGTAATTCAGAAACCTTGCTTGTGTGATACATAGTAAGTCTCTTCATTTATTACTGCTTGCCTGTTGTT

FIGURE 340B

ATATCTGGATTATCAAAAGCAATAGTGCACCAATTAAGATGTGCTCAAATCAGGACTTAAATCATAGGCACCACA
TTTTTCATGTCAGACTAGTTACTTTGTTGATTCTCAGTTACTGTAGGCATCAAAAGGCAAAAATCA

FIGURE 341

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MNNHVSSKPSTMKLKHTINPILLYFIHFLISLYTILTYIPFYFFSESRQEKSNRIKAKPVNSKPDSAYRSVNSLD
GLASVLYPGCDTLDKVFTYAKNKFKNKRLLGTREVLNEEDEVQPNGKIFKKVILGQYNWLSYEDVFVRAFNFGNG
LQMLGQKPKTNIAIFCETRAEWMIAAQACFMYNFQLVTLYATLGGPAIVHALNETEVTNIITSKELLQTKLKDIV
SLVPRLRHIITVDGKPPTWSDFPKGIIVHTMAAVEALGAKASMENQPHSKPLPSDIAVIMYTSGSTGLPKGVMIS
HSNIIAGITGMAERIPELGEEDVYIGYLPLAHVLELSAELVCLSHGCRIGYSSPQTLADQSSKIKKGSKGDTSML
KPTLMAAVPEIMDRIYKNVMNKVSEMSSFQRNLFILAYNYKMEQISKGRNTPLCDSFVFRKVRSLLGGNIRLLLC
GGAPLSATTQRFMNICFCCPVGQGYGLTESAGAGTISEVWDYNTGRVGAPLVCCEIKLKNWEEGGYFNTDKPHPR
GEILIGGQSVTMGYYKNEAKTKADFSEDENGQRWLCTGDIGEFEPDGCLKIIDRKKDLVKLQAGEYVSLGKVEAA
LKNLPLVDNICAYANSYHSYVIGFVVPNQKELTELARKKGLKGTWEELCNSCEMENEVLKVLSEAAISASLEKFE
IPVKIRLSPEPWTPETGLVTDAFKLKRKELKTHYQADIERMYGRK
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FIGURE 342

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AGGGGCCTTAGCGTGCCGCATCGCCGAGATCCAGCGCCCAGAGAGACACCAGAGAACCCACCATGGCCCCCTTTG
AGCCCCTGGCTTCTGGCATCCTGTTGTTGCTGTGGCTGATAGCCCCCAGCAGGGCCTGCACCTGTGTCCCACCCC
ACCCACAGACGGCCTTCTGCAATTCCGACCTCGTCATCAGGGCCAAGTTCGTGGGGACACCAGAAGTCAACCAGA
CCACCTTATACCAGCGTTATGAGATCAAGATGACCAAGATGTATAAAGGGTTCCAAGCCTTAGGGGATGCCGCTG
ACATCCGGTTCGTCTACACCCCCGCCATGGAGAGTGTCTGCGGATACTTCCACAGGTCCCACAACCGCAGCGAGG
AGTTTCTCATTGCTGGAAAACTGCAGGATGGACTCTTGCACATCACTACCTGCAGTTTCGTGGCTCCCTGGAACA
GCCTGAGCTTAGCTCAGCGCCGGGGCTTCACCAAGACCTACACTGTTGGCTGTGAGGAATGCACAGTGTTTCCCT
GTTTATCCATCCCCTGCAAACTGCAGAGTGGCACTCATTGCTTGTGGACGGACCAGCTCCTCCAAGGCTCTGAAA
AGGGCTTCCAGTCCCGTCACCTTGCCTGCCTGCCTCGGGAGCCAGGGCTGTGCACCTGGCAGTCCCTGCGGTCCC
AGATAGCCTGAATCCTGCCCGGAGTGGAACTGAAGCCTGCACAGTGTCCACCCTGTTCCCACTCCCATCTTTCTT
CCGGACAATGAAATAAAGAGTTACCACCCAGC
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FIGURE 343

MAPFEPLASGILLLLWLIAPSRACTCVPPHPQTAFCNSDLVIRAKFVGTPEVNQTTLYQRYEIKMTKMYKGFQAL
GDAADIRFVYTPAMESVCGYFHRSHNRSEEFLIAGKLQDGLLHITTCSFVAPWNSLSLAQRRGFTKTYTVGCEEC
TVFPCLSIPCKLQSGTHCLWTDQLLQGSEKGFQSRHLACLPREPGLCTWQSLRSQIA

FIGURE 344

CAACCAGGGAGATTTCTCCATTTTCCTCTTGTCTACAGTGCGGCTACAAATCTGGGATTTTTTTATTACTTCTTT
TTTTTTCGAACTACACTTGGGCTCCTTTTTTTGTGCTCGACTTTTCCACCCTTTTTCCCTCCCTCCTGTGCTGCT
GCTTTTTGATCTCTTCGACTAAAATTTTTTTATCCGGAGTGTATTTAATCGGTTCTGTTCTGTCCTCTCCACCAC
CCCCACCCCCCTCCCTCCGGTGTGTGTGCCGCTGCCGCTGTTGCCGCCGCCGCTGCTGCTGCTGCTCGCCCCGTC
GTTACACCAACCCGAGGCTCTTTGTTTCCCCTCTTGGATCTGTTGAGTTTCTTTGTTGAAGAAGCCAGC**ATG**GGT
GCCCAGTTCTCCAAGACCGCAGCGAAGGGAGAAGCCGCCGCGGAGAGGCCTGGGGAGGCGGCTGTGGCCTCGTCG
CCTTCCAAAGCGAACGGACAGGAGAATGGCCACGTGAAGGTAAACGGCGACGCTTCGCCCGCGGCCGCCGAGTCG
GGCGCCAAGGAGGAGCTGCAGGCCAACGGCAGCGCCCCGGCCGCCGACAAGGAGGAGCCCGCGGCCGCCGGGAGC
GGGGCGGCGTCGCCCTCCTCGGCCGAGAAGGTGAGCCGGCCGCCGCCGCTGCCCCCGAGGCCGGGGCCAGCCCG
GTAGAGAAGGAGGCCCCCGCGGAAGGCGAGGCTGCCGAGCCCGGCTCGGCCACGGCCGCGGAGGGAGAGGCCGCG
TCGGCCGCCTCCTCGACTTCTTCGCCCAAGGCCGAGGACGGGGCCACGCCCTCGCCCAGCAACGAGACCCCGAAA
AAAAAAAAGAAGCGCTTTTCCTTCAAGAAGTCTTTCAAGCTGAGCGGCTTCTCCTTCAAGAAGAACAAGAAGGAG
GCTGGAGAAGGCGGTGAGGCTGAGGCGCCCGCTGCCGAAGGCGGCAAGGACGAGGCCGCCGGGGGCGCAGCTGCG
GCCGCCGCCGAGGCGGGCGCGGCCTCCGGGGAGCAGGCAGCGGCGCCGGGCGAGGAGGCGGCAGCGGGCGAGGAG
GGGGCGGCGGGTGGCGACCCGCAGGAGGCCAAGCCCCAGGAGGCCGCTGTCGCGCCAGAGAAGCCGCCCGCCAGC
GACGAGACCAAGGCCGCCGAGGAGCCCAGCAAGGTGGAGGAGAAAAAGGCCGAGGAGGCCGGGGCCAGCGCCGCC
GCCTGCGAGGCCCCCTCCGCCGCCGGGCCCGGCGCGCGCCCCCGGAGCAGGAGGCAGCCCCCGCGGAGGAGCCCGCG
GCCGCCGCAGCCTCGTCAGCCTGCGCAGCCCCCTCACAGGAGGCCCAGCCCGAGTGCAGTCCAGAAGCCCCCCCA
GCGGAGGCGGCAGAG**TAA**AAGAGCAAGCTTTTGTGAGATAATCGAAGAACTTTTCTCCCCGTTTGTTTGTTGGA
GTGGTGCCAGGTACTGTTTTGGAGAACTTGTCTACAACCAGGGATTGATTTTAAAGATGTCTTTTTTTATTTTAC
TTTTTTTTAAGCACCAAATTTTGTTGTTTTTTTTTTTCTCCCCTCCCCACAGATCCCATCTCAAATCATTCTGTT
AACCACCATTCCAACAGGTCGAGGAGAGCTTAAACACCTTCTTCCTCTGCCTTGTTTCTCTTTTATTTTTTATTT
TTTCGCATCAGTATTAATGTTTTTGCATACTTTGCATCTTTATTCAAAAGTGTAAACTTTCTTTGTCAATCTATG
GACATGCCCATATATGAAGGAGATGGGTGGGTCAAAAAGGGATATCAAATGAAGTGATAGGGGTCACAATGGGGA
AATTGAAGTGGTGCATAACATTGCCAAAATAGTGTGCCACTAGAAATGGTGTAAAGGCTGTCTTTTTTTTTTTTT
TTAAAGAAAGTTATTACCATGTATTTTGTGAGGCAGGTTTACAACACTACAAGTCTTGAGTTAAGAAGGAAAGA
GGAAAAAGAAAAAACACCAATACCCAGATTTAAAAAAAAAAAAACGATCATAGTCTTAGGAGTTCATTTAAACC
ATAGGAACTTTTCACTTATCTCATGTTAGCTGTACCAGTCAGTGATTAAGTAGAACTACAAGTTGTATAGGCTTT
ATTGTTTATTGCTGGTTTATGACCTTAATAAAGTGTAATTATGTATTACCAGCAGGGTGTTTTAACTGTGACTA
TTGTATAAAAACAAATCTTGATATCCAGAAGCACATGAAGTTTGCAACTTTCCACCCTGCCCATTTTTGTAAAAC
TGCAGTCATCTTGGACCTTTTAAAACACAAATTTTAAACTCAACCAAGCTGTGATAAGTGGAATGGTTACTGTTT
ATACTGTGGTATGTTTTTGATTACAGCAGATAATGCTTTCTTTTCCAGTCGTCTTTGAGAATAAAGGAAAAAAAA
TCTTCAGATGCAATGGTTTTGTGTAGCATCTTGTCTATCATGTTTTGTAAATACTGGAGAAGCTTTGACCAATTT
GACTTAGAGATGGAATGTAACTTTGCTTACAAAAATTGCTATTAAACTCCTGCTTAAGGTGTTCTAATTTTCTGT
GAGCACACTAAAAGCGAAAAATAAATGTGAATAAAATGT

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FIGURE 345

MGAQFSKTAAKGEAAAERPGEAAVASSPSKANGQENGHVKVNGDASPAAAESGAKEELQANGSAPAADKEEPAAA
GSGAASPSSAEKGEPAAAAAPEAGASPVEKEAPAEGEAAEPGSATAAEGEAASAASSTSSPKAEDGATPSPSNET
PKKKKKRFSFKKSFKLSGFSFKKNKKEAGEGGEAEAPAAEGGKDEAAGGAAAAAAEAGAASGEQAAAPGEEAAAG
EEGAAGGDPQEAKPQEAAVAPEKPPASDETKAAEEPSKVEEKKAEEAGASAAACEAPSAAGPGAPPEQEAAPAEE
PAAAAASSACAAPSQEAQPECSPEAPPAEAAE

FIGURE 346

GTTTGAATGAGACTCGTCGCACCGAAGCCGCCGCCACCACCGCGCCTCCGCCTCGGCCGCCGCCGCAGCTGCTCC
TGGTCCCCGTCCCTTTGCCGCCCTCGTCAGGCCCAGCTCTCCTGCGCCGCCGCCTCCCGCCGCGCCCCGCC**ATG**C
CGCTCTACTCCGTTACTGTAAAATGGGGAAAGGAGAAATTTGAAGGTGTAGAATTGAATACAGATGAACCTCCAA
TGGTATTCAAGGCTCAGCTGTTTGCGTTGACTGGAGTCCAGCCTGCCAGACAGAAAGTTATGGTGAAAGGAGGAA
CGCTAAAGGATGATGATTGGGGAAACATCAAAATAAAAAATGGAATGACTCTACTAATGATGGGGTCAGCAGATG
CTCTTCCAGAAGAACCCTCAGCCAAAACTGTCTTCGTAGAAGACATGACAGAAGAACAGTTAGCATCTGCTATGG
AGTTACCATGTGGATTGACAAACCTTGGTAACACTTGTTACATGAATGCCACAGTTCAGTGTATTCGTTCTGTGC
CTGAACTCAAAGATGCCCTTAAAAGGTATGCAGGTGCCTTGAGAGCTTCAGGGGAAATGGCTTCAGCGCAGTATA
TTACTGCAGCCCTTAGAGATTTGTTTGATTCCATGGATAAAACTTCTTCCAGTATTCCACCTATTATTCTACTGC
AGTTTTTGCACATGGCTTTCCCACAGTTTGCCGAGAAAGGTGAACAAGGACAGTATCTTCAACAGGATGCTAATG
AATGTTGGATACAAATGATGCGAGTATTGCAACAGAAATTGGAAGCAATAGAGGATGATTCTGTTAAAGAGACAG
ACTCCTCATCTGCATCGGCAGCGACACCTTCTAAAAAGAAAAGTTTAATCGATCAGTTCTTCGGTGTTGAGTTTG
AAACTACCATGAAATGTACAGAATCTGAAGAAGAAGAAGTCACCAAAGGAAAGGAAAATCAACTTCAGCTTAGCT
GTTTTATCAATCAGGAAGTCAAGTATCTTTTTACAGGACTTAAATTGCGACTTCAGGAAGAAATCACCAAACAGT
CTCCAACGTTGCAAAGAAATGCCTTGTATATCAAATCTTCCAAGATCAGCCGGCTGCCTGCTTACTTGACCATTC
AGATGGTTCGATTTTTTTATAAAGAGAAGGAATCTGTGAATGCCAAAGTTCTTAAGGATGTTAAATTTCCTCTTA
TGTTGGATATGTATGAACTGTGTACACCAGAACTTCAAGAGAAATGGTGTCTTTTCGATCCAAATTCAAGGATC
TAGAAGATAAAAAAGTGAATCAGCAGCCAAATACAAGTGACAAAAAGAGTAGTCCCCAGAAAGAAGTTAAGTATG
AACCCTTTTCTTTGCTGATGATATTGGCTCCAATAATTGTGGATACTATGACTTACAAGCAGTACTAACACACC
AGGGAAGGTCTAGTTCTTCAGGTCATTATGTATCATGGGTGAAAAGGAAACAAGATGAATGGATTAAGTTTGATG
ATGACAAAGTCAGCATCGTAACACCAGAAGATATCTTACGGCTTTCTGGTGGTGGAGACTGGCATATCGCTTACG
TTCTACTCTATGGGCCTCGCAGAGTTGAAATAATGGAAGAGGAAAGTGAACAG**TAA**TCTTCATTTTAGTATTTAT
GCTTAGATGTGAAAATAAATGTTATTTGTTGATCATTTCTATAATCCAGAGCTTTAGAGGAAGACACATAGGTGG
GTTTATGTTTCACCTCATTTGGAACAAAAGAGGACAGAAGCAGACCACTCTGTGCACCAACCTAAAAAATTACAG
AGAAGAGAAAATTATCTTTGGATTGTGCTGCCCTATATAAAGGTGGCAGAAGACATTTTAAAAAGCTTATTAT
TTCTTGCATTATTTTAAAAAGTTCAGAGTTGAAATGCCTTTCAACCATTTCCTTCTGTGGTCATTTTTCTTGCTG
CCTTTTTCACCCAAGATTCAGCAGTCAGATGTTTACTGCACACCTATTACCTATTATTTGCTGTTCTTGCATGGT
TCAAACCACCATTCTGTAGCCACCCATCCTTTGCCTTATCTAACAAACATTTTTCCAGGAAGGTGGAAAAGGAAG
TGTTGCTCTCATTGTGTGACTCAGTGCTGCTGTCCATCCCATGGAAACATGGGCACAATCAAGTATTTGTCCAGC
CTATTGCAGGCTTTTCCTGACTTTAAAATAAATTGTGATCAATAATAGTACCTTTGATTATACATTTATTATTGT
GTCTCTCTGATGTACTGTGGATTGTACATTTAACTTTGGAATGGCTTTGTAATAATCAGTCTTAAGAAAATGT
TGACAAGCTCTGGTTGCTTATTTTTAGAAAATGAGGACATTTAATAATAATAAAAAAAAAGGGATTAATAGCTTT
TGACCTCAAGTCTTTTGTCTTCTGAGTGTTGGAGCTTGGCTGAAGACATGTTTAATACTGTACAATTTCTGAAGA
TGGTTATTAACACTGTGCTGTTAAGCATCCATTTAAAAATATTTGTTATCTTCTTTGCCTGCCTGTATTTTAAAA
AGAAATACAAAGTTGTAAAGTAATGGATTTCTTTGGATGCTGAATGCAGTGATGTTATCAGTCAGATTCTTTCC
TTGGCTCAGTTGTGTTTGTATTTCCTTTCTTAATTCCCCAAATCTTGGCTGGGCACGGTGGCTCACGCCTGTAAT
CCCAGCACTTTGGGAGGCTGAGGCAGGTGGTTCACTGGAGGTTGAGTTCGAGACCAGCCTGGCCACATGGTGAAA
CCCTGTCTCTACTAAAGATATAAAAATTAGCTGGATGTGGTGGTGCACACCTGTGATCCCAGCTACTTGGGAGGC
TGAGGTGGGAGAATTGCTTGAACCTGGAAGGCAGAAGTTGCAGTGAGCTGAGATCACACCACTGCACTCCAGCCT
GGGTGACAGAGAGACTCTGTCTCAAAAAAAAAAAAAAAAAAAA

FIGURE 347

MPLYSVTVKWGKEKFEGVELNTDEPPMVFKAQLFALTGVQPARQKVMVKGGTLKDDDWGNIKIKNGMTLLMMGSA
DALPEEPSAKTVFVEDMTEEQLASAMELPCGLTNLGNTCYMNATVQCIRSVPELKDALKRYAGALRASGEMASAQ
YITAALRDLFDSMDKTSSSIPPIILLQFLHMAFPQFAEKGEQGQYLQQDANECWIQMMRVLQQKLEAIEDDSVKE
TDSSSASAATPSKKKSLIDQFFGVEFETTMKCTESEEEEVTKGKENQLQLSCFINQEVKYLFTGLKLRLQEEITK
QSPTLQRNALYIKSSKISRLPAYLTIQMVRFFYKEKESVNAKVLKDVKFPLMLDMYELCTPELQEKMVSFRSKFK
DLEDKKVNQQPNTSDKKSSPQKEVKYEPFSFADDIGSNNCGYYDLQAVLTHQGRSSSSGHYVSWVKRKQDEWIKF
DDDKVSIVTPEDILRLSGGGDWHIAYVLLYGPRRVEIMEEESEQ

FIGURE 348

GAGGAGCTCTGCGCGGCGCGGCGGGCGATCCGAGCCGGGACGGGCTGCAGGCGGGGGTGCTGCAGAGGACACGAG
GCGGCGGGCTGGAGAC**ATG**GACCGCGGCGAGCAAGGTCTGCTGAGAACAGACCCAGTCCCTGAGGAAGGAGAAGA
TGTTGCTGCCACGATCAGTGCCACAGAGACCCTCTCGGAAGAGGAGCAGGAAGAGCTAAGAAGAGAACTTGCAAA
GGTAGAAGAAGAAATCCAGACTCTGTCTCAAGTGTTAGCAGCAAAAGAGAAGCATCTAGCAGAGATCAAGCGGAA
ACTTGGAATCAATTCTCTACAGGAACTAAAACAGAACATTGCCAAAGGGTGGCAAGACGTGACAGCAACATCTGC
TTACAAGAAGACATCTGAAACCTTATCCCAGGCTGGACAGAAGGCCTCAGCTGCTTTTTCGTCTGTTGGCTCAGT
CATCACCAAAAAGCTGGAAGATGTAAAAAACTCCCCAACTTTTAAATCATTTGAAGAAAAGGTCGAAAACTTAAA
GTCTAAAGTAGGGGGAACCAAGCCTGCTGGTGGTGATTTTGGAGAAGTCTTGAATTCGGCTGCAAATGCTAGTGC
CACCACCACGGAGCCTCTTCCAGAAAAGACACAGGAGAGCCTG**TGA**GATTCCTACCTTTGTTCTGCTACCCACTG
CCAGATGCTGCAAGCGAGGTCCAAGCACATCTTGTCAACATGCATTGCCATGAATTTCTACCAGATGTGCTTTTA
TTTAGCTTTACATATTCCTTTGACCAAATAGTTTGTGGGTTAAACAAAATGAAAATATCTTCACCTCTATTCTTG
GGAAACACCCTTTAGTGTACATTTATGTTCCTTTATTTAGGAAACACCATTATAAAAACACTTATAGTAAATGGG
GACATTCACTATAATGATCTAAGAAGCTACAGATTGTCATAGTTGTTTTCCTGCTTTACAAAATTGCTCCAGATC
TGGAATGCCAGTTTGACCTTTGTCTTCTATAATATTTCCTTTTTTTCCCCTCTTTGAATCTCTGTATATTTGATT
CTTAACTAAAATTGTTCTCTTAAATATTCTGAATCCTGGTAATTAAAAGTTTGGGTGTATTTTCTTTACCTCCAA
GGAAAGAACTACTAGCTACAAAAAATATTTTGGAATAAGCATTGTTTTGGTATAAGGTACATATTTTGGTTGAAG
ACACCAGACTGAAGTAAACAGCTGTGCATCCAATTTATTATAGTTTTGTAAGTAACAATATGTAATCAAACTTCT
AGGTGACTTGAGAGTGGAACCTCCTATATCATTATTTAGCACCGTTTGTGACAGTAACCATTTCAGTGTATTGTT
TATTATACCACTTATATCAACTTATTTTTCACCAGGTTAAAATTTTAATTTCTACAAAATAACATTCTGAATCAA
GCACACTGTATGTTCAGTAGGTTGAACTATGAACACTGTCATCAATGTTCAGTTCAAAAGCCTGAAAGTTTAGAT
CTAGAAGCTGGTAAAAATGACAATATCAATCACATTAGGGGAACCATTGTTGTCTTCACTTAATCCATTTAGCAC
TATTTAAAATAAGCACACCAAGTTATATGACTAATATAACTTGAAAATTTTTATACTGAGGGGTTGGTGATAAC
TCTTGAGGATGTAATGCATTAATAAAAATCAACTCATCATTTTCTACTTGTTTTCAATGTGTTGGAAACTGTAAA
ATGATACTGTAGAACCTGTCTCCTACTTTGAAAACTGAATGTCAGGGCTGAGTGAATCAAAGTGTCTAGACATAT
TTGCATAGAGGCCAAGGTATTCTATTCTAATAACTGCTTACTCAACACTACCACCTTTTCCTTATACTGTATATG
ATTATGGCCTACAATGTTGTATTTGTTATTTATTAAATTGTGATTGTTTTATTATTGTTTATGCCAAATGTTAAC
TGCCAAGCTTGGAGTGACCTAAAGCATTTTTTAAAAGCATGGCTAGATTTACTTCAGTATAAATTATCTTATGAA
AACCAAATTTTAAAAGCCACAGGTGTTGATTGTTATAAAATAACATGCTGCCATTCTTGATTGCTAGAGTTTTTG
TTAGTACTTTGGATGCAATTAAAACTATGTGCTATCACATGTGAAAAGCTTAATAAATTCCATCTATCAGTAGTA
TAGGTCTCAATATTTATTATGAGACCAGTGGTCTGGAAACAGCTTGTTGTACCGAATCAACTGGAGTCTATGCTT
AAAAAAAAAATTTTTTTTTAACCATCCTTAAATTATTGCTTAATGGTATCATATTAACATATTCTAAATAAGGG
CTTTAAGGCACAGGCTGTTGAAGCATTTTCTCAGAGGAGTGGATCTGTAGAAGTCTGTCTTTCTATAGAAATATT
GTGCTTACTCAAGTGTTAAATTATTTTTTCTATGAACTAGTCTACTTCTTAAAATTCAAACATATTCTTTTGATC
ACATTGTTTCTTGAGCATCCTGCCCTGCTACTAACTTTTCAACAAGGCAAAATGGAGTAAAGTGGCAATTTCTTT
AGATGAGTGAAATACCCTCAAGTCTCTTTTCTGCCCAAAAAGGGAAAAGTGATAGAAATGGGGGTGGCAAGTGGG
GTGAGTGGATGAAGGTGGGTATTGGGGGTGGCTGTGAAAGAAAATAATGGAGAATCACTTTTCTAGACATCTACC
TATACTTAATCTAAGAAACAAAGTAATCTACTGTAAAGTACTCTGCCCCTTGAAAGAAGTATTAAAAAGAGTGAG
GATGGATTTAGAAAAAAACATGAATTTAGAAATATTCAAAATGGTTTTTGTGGCAGATTCAATATTATGAATTCA
CAGATATTTAAAGAATGAGAAACATAGTAATTAGTAGAAATGCCAGAAACAGTTCCTGGTTCCTCTTGTGTTTGA
CACTAAGAAAATAGCAAGAGTGTGAAATCTCAGATACTTATGAAATCTCACAGATGTAAGGACTCAAGTGTAGAA
GAAAATATCCCCTTCTTACAAAAAGAAATGTCAATTTATGGAGTTTGTGGGAAATAGGGCAAGAATTCTTATGCT
TATGAGAGCCAAGTAGTCAGTGGAAGAGAGTAGAGCTCAAAACTGGATTATCACCTTAGCAACTTAGAATAGTTT
GAAATAGAAAAAAGTATTTAATTTGGATCTGGATCTGTTAAGATATGCACAGTCTATTTTTTGTATAGTATTGG
AAAATAAAAATGCTATAATTTG

FIGURE 349

MDRGEQGLLRTDPVPEEGEDVAATISATETLSEEEQEELRRELAKVEEEIQTLSQVLAAKEKHLAEIKRKLGINS
LQELKQNIAKGWQDVTATSAYKKTSETLSQAGQKASAAFSSVGSVITKKLEDVKNSPTFKSFEEKVENLKSKVGG
TKPAGGDFGEVLNSAANASATTTEPLPEKTQESL

FIGURE 350A

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AGGTAGCAAGATGGCCGCCGCTGAGGAAGGCTGTAGTGTCGGGGCCGAAGCGGACAGGGAATTGGAGGAGCTTCT
GGAAAGTGCTCTTGATGATTTCGATAAAGCCAAACCCTCCCCAGCACCCCCTTCTACCACCACGGCCCCTGATGC
TTCGGGGCCCCAGAAGAGATCGCCAGGAGACACTGCCAAAGATGCCCTCTTCGCTTCCCAAGAGAAGTTTTTCCA
GGAACTATTCGACAGTGAACTGGCTTCCCAAGCCACTGCGGAGTTCGAGAAGGCAATGAAGGAGTTGGCTGAGGA
AGAACCCCACCTGGTGGAGCAGTTCCAAAAGCTCTCAGAGGCTGCAGGGAGAGTGGGCAGTGATATGACCTCCCA
ACAAGAATTCACTTCTTGCCTAAAGGAAACACTAAGTGGATTAGCCAAAAATGCCACTGACCTTCAGAACTCCAG
CATGTCGGAAGAAGAGCTGACCAAGGCCATGGAGGGGCTAGGCATGGACGAAGGGGATGGGGAAGGGAACATCCT
CCCCATCATGCAGAGTATTATGCAGAACCTACTCTCCAAGGATGTGCTGTACCCATCACTGAAGGAGATCACAGA
AAAGTATCCAGAATGGTTGCAGAGTCATCGGGAATCTCTACCTCCAGAGCAGTTTGAAAAATATCAGGAGCAGCA
CAGCGTCATGTGCAAAATATGTGAGCAGTTTGAGGCAGAGACCCCCACAGACAGTGAAACCACTCAAAAGGCTCG
TTTTGAGATGGTGCTGGATCTTATGCAGCAGCTACAAGATTTAGGCCATCCTCCAAAAGAGCTGGCTGGAGAGAT
GCCTCCTGGCCTCAACTTTGACCTGGATGCCCTCAATCTTTCGGGCCCACCAGGTGCCAGTGGTGAACAGTGTCT
GATCATGTGAAACACAACACGTTTTCCTCTCTGAGTCCCAGCTATGGGGAACATCTGGAGTCAGCAGAACCATTG
GGACCTGAGGCAGGAGTGTCACCTGCGGGAGAAGTCTGCCCGCTGCCCTCTGTCATCCCATTCAAGATTGTGCCA
TACCAGCTGAGGTTTTTCCTCTGTCTCTCTAGGAATAGGGTCTGTTTCACAGGCCATTTCTGTGAACCCTACTCC
ATTGTGGTTTCTGCCACTATCAAAGTTCCAGCTACCTGCAAGGTGAAGGAAGGCATCCCTTTTGGGGCATGCACT
TTCTTTCCTTTCTCAAAATAATGTTATATGTGGCCACACTGATGTTCACCTTTACGTCCAGGGTCTTTGTGCCTT
GTCTCTACTCCCTCTCTTGGATCTGGGGAGGAGGGGCAGAGACCTGGGACTCTGTATTTCTATAGTTCTCCTGGC
AGAGCCTTTGAGAATGGGGAGAAACAGCCTGGGCTGGGGCTACAGGTCTGTCACTATGCTCTCTTGCCTTCAGAC
AGACCATTCTGAATTCTCTAAAGGGAAAGGGCTTTTGCATCTAATCACAATAGAGTTGAAAGAGAGGCCTTAGGA
TTCTCCTCTCTAGGTGCTGAGCCCTCACCTCCCTGTTCCAGGCTGAGAACTCAAATGGTTACCCTGCTTCTTC
CTACAATGCTGTGTGATATGGGTGAACCCAGCCCCTGACCTTCCTCTATCCCCTGCCCATCCTCCCTTTTACCTC
CTCTCTTTTTTAAACACCTGTTTATCCCAACCTTTTTGAGCTCAAGCTGTGATAAAGAAGGGCCCATCCTATTTC
CCCTCATCTAGTCCATTTACGATTCTCACTGACTCCCCGTCTTCCTGGCAGACACAAATAAACCCAGTGTCAGGT
CTAGGAAATTAATGGCTATTCTTCCCCAGATACATTCTGGCTTATTTGAGATACATGATTCTCTTAGAATCCTGT
CCCTTGGTTCAGGAAAGTAGCTTGGAAAAGGAGTAGGGGTATAGCTTGGGTCCCTTTTCCTGCAAGGCCCCATGG
GGCAGAATATAATAAATATTCTGAGTGAGGAGTGTGGTCTTTTTCTGATCTTCCTCAGCTTCCGTAAGTTGCAGA
GTGAGGTATATTAGGAGACTAGTTCTACACAATATTGTAATGCTGGGTTCCATCAACACCCACCTTCCACAACTC
AGTCTGCACCTCAGTTGGCAAAGGAGACTGGATGGCCATCTTTCCTCATGTTCCCTTGAGTATTTCAATGTAGAA
AGCCCTTCAAGTGGTATTATATTTTAACCTTTTACATTATTGTTATTAATGTTAGTAATATATTGTTATGTTTTC
TAAATTATTTTTCTTTAAGCTGACGTGGCTTTTTTTCTGTGGCTCCCAGTGGGTCTACGGACCTTGGCTGACATA
TGTTGGTAGGTACTCTGGTCAGCTCAGCTGGCTGTCCTGGTTCACTCAGAAGATAAGTCTCTCCAAAGCAAATTC
ACATGCATTATGAGTCGCTTTGAGCTTCTGACATGTCACTTGCCCCGAGGTTAAAACTTTTCACCCCTTGAAGAC
CTTACATGTTTTATGGTATTGGTGAGGAAGGAAATGTTCTCAAGGTCTCAGGCTATTGGGAAATTCCAACTCCT
ATACCTTACCAGAGCATGGAAGAGCCCAGATCTGAATGTAAAACGTCTCTGTTCTGCCAGAGATGGAAAAAATAC
AGGTATACTTGTGATATAGTCATGGGGCTTCAGTGTCACTATTTTCTCCTTAAAGCTCCAGCCAAAAACTGGACA
AGGATAGAGAGGAGGAGGGAAGAACAAAAGAGCCCTTCTCTATGAACCTTGTGCCTTCTGTCCTACCAGTTTTCT
TTTACAGATTCTCACTTCTGCTAGCCTAGCCAGGGCTTACTCCAGGAATCTAAATAGATGCCCTAGTCCACTTTA
TCTTTGTTCCCAAGGCACTCATTTTTATTTTGATTTTGATTGAATGTGAGCAGGTTGACCTCAGGTCACACTTTG
TTCCAAAAACTTTTGGAATTATTCCAGGACTTGTGGTGGAGTTATGGTACTCTAGGGCAGTCTTTCTCAAACTAT
GTATGGTAAAGGACCAGGTTTTTTGTTTTCCAGTCCTTCACTTATCAATATGCATTCCTATTGCCGATGACAGGT
ATGGAGTTCACACTGTGTGCTGCCGACCCGGCAAGTTTGACAGCACCCAAACTGGCCAGACTGTTCTGTAGGTTA
AGTCCATTGATCATGTACTTGGATATCACAGCAACATTGAAATGCTAAAAAGTTTTTAAACACTCTCAATTTCTA
ATTCACCATGTCACAGACTGGTGAAAAAAAAAAAAGGTGTTCACTGACCAGCACAAGTCTGCAGATCATCTTTG
AGTAGCACTGTTTTGGGGCCCTCGGTCTCTCTGAAGACCCTAGCAGAACTGATACCTACCTGTATCTCTTGTTCT
CTCCTATTTGAGTTTCACTTCCAGAGAACTTGTTCTTCAGCAAGAATGTGTCACTAGTAAGGACATCTCTAGCAT
TTCTCTAGCCTTCCTTTTCTGCTGCTCAAAAATAATCGTTACAAAGCTTAGGTTTAAGCTGTATATGAAATATTT
ATGCGACTCTCAAACTTTAAAGGAGTTGCTCCTTTGTTCCAAAATTAAATGTGTTAGATAAATTTGTGATTGTAT
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FIGURE 350B

GGGTGGCTTCATGAATTAAGAATTGAATTAATACAGACTTTTTGATAATAAAAAAAAAAAA

FIGURE 351

MAAAEEGCSVGAEADRELEELLESALDDFDKAKPSPAPPSTTTAPDASGPQKRSPGDTAKDALFASQEKFFQELF
DSELASQATAEFEKAMKELAEEEPHLVEQFQKLSEAAGRVGSDMTSQQEFTSCLKETLSGLAKNATDLQNSSMSE
EELTKAMEGLGMDEGDGEGNILPIMQSIMQNLLSKDVLYPSLKEITEKYPEWLQSHRESLPPEQFEKYQEQHSVM
CKICEQFEAETPTDSETTQKARFEMVLDLMQQLQDLGHPPKELAGEMPPGLNFDLDALNLSGPPGASGEQCLIM

FIGURE 352

CGCAACGCCGGTGCCTGAGGAGCG**ATG**CCGAGGGAAATCATCACCCTACAGTTGGGCCAGTGCGGCAATCAGATT
GGGTTCGAGTTCTGGAAACAGCTGTGCGCCGAGCATGGTATCAGCCCCGAGGCGATCGTGGAGGAGTTCGCCACC
GAGGGCACTGACCGCAAGGACGTCTTTTTCTACCAGGCAGACGATGAGCACTACATCCCCCGGGCCGTGCTGCTG
GACTTGGAACCCCGGGTGATCCACTCCATCCTCAACTCCCCCTATGCCAAGCTCTACAACCCAGAGAACATCTAC
CTGTCGGAACATGGAGGAGGAGCTGGCAACAACTGGGCCAGCGGATTCTCCCAGGGAGAAAAGATCCATGAGGAC
ATTTTTGACATCATAGACCGGGAGGCAGATGGTAGTGACAGTCTAGAGGGCTTTGTGCTGTGTCACTCCATTGCT
GGGGGGACAGGCTCTGGACTGGGTTCCTACCTCTTAGAACGGCTGAATGACAGGTATCCTAAGAAGCTGGTGCAG
ACATACTCAGTGTTTCCCAACCAGGACGAGATGAGCGATGTGGTGGTCCAGCCTTACAATTCACTCCTCACACTC
AAGAGGCTGACGCAGAATGCAGACTGTCTGGTGGTGCTGGACAACACAGCCCTGAACCGGATTGCCACAGACCGC
CTGCACATCCAGAACCCATCCTTCTCCCAGATCAACCAGCTGGTGTCTACCATCATGTCAGCCAGCACCACCACC
CTGCGCTACCCTGGCTACATGAACAATGACCTCATCGGCCTCATCGCCTCGCTCATTCCCACCCCACGGCTCCAC
TTCCTCATGACCGGCTACACCCCTCTCACTACGGACCAGTCAGTGGCCAGCGTGAGGAAGACCACGGTCCTGGAT
GTCATGAGGCGGCTGCTGCAGCCCAAGAACGTGATGGTGTCCACAGGCCGAGACCGCCAGACCAACCACTGCTAC
ATCGCCATCCTCAACATCATCCAGGGAGAGGTGGACCCCACCCAGGTCCACAAGAGCTTGCAGAGGATCCGGGAA
CGCAAGTTGGCCAACTTCATCCCGTGGGGCCCCGCCAGCATCCAGGTGGCCCTGTCGAGGAAGTCTCCCTACCTG
CCCTCGGCCCACCGGGTCAGCGGGCTCATGATGGCCAACCACACCAGCATCTCCTCGCTCTTCGAGAGAACCTGT
CGCCAGTATGACAAGCTGCGTAAGCGGGAGGCCTTCCTGGAGCAGTTCCGCAAGGAGGACATGTTCAAGGACAAC
TTTGATGAGATGGACACATCCAGGGAGATTGTGCAGCAGCTCATCGATGAGTACCATGCGGCCACACGGCCAGAC
TACATCTCCTGGGGCACCCAGGAGCAG**TGA**GTCCCCCAGGACAGGGGACCCTCATCTGCCTTACTGGTTGGCCCA
AGCCCTGCCTGACTGACCACCCCCTCAGAGCACAGATCAGGGACCTCACGCATCTCTTTCTCATATACATGGACT
CTCTGTTGGCCTGCAAACACATTTACTTCTCCTCTTATGAGACTATTTATCTTTAATAAAGCACTGGG

FIGURE 353

MPREIITLQLGQCGNQIGFEFWKQLCAEHGISPEAIVEEFATEGTDRKDVFFYQADDEHYIPRAVLLDLEPRVIH
SILNSPYAKLYNPENIYLSEHGGGAGNNWASGFSQGEKIHEDIFDIIDREADGSDSLEGFVLCHSIAGGTGSGLG
SYLLERLNDRYPKKLVQTYSVFPNQDEMSDVVVQPYNSLLTLKRLTQNADCLVVLDNTALNRIATDRLHIQNPSF
SQINQLVSTIMSASTTTLRYPGYMNNDLIGLIASLIPTPRLHFLMTGYTPLTTDQSVASVRKTTVLDVMRRLLQP
KNVMVSTGRDRQTNHCYIAILNIIQGEVDPTQVHKSLQRIRERKLANFIPWGPASIQVALSRKSPYLPSAHRVSG
LMMANHTSISSLFERTCRQYDKLRKREAFLEQFRKEDMFKDNFDEMDTSREIVQQLIDEYHAATRPDYISWGTQE
Q

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FIGURE 354A

TTTTTAAATTTTGCATTTGACTTAAAGTGCC**ATG**AGAAAATTTGCATACTGCAAGGTGGTCCTAGCCACCTCCTT
GATTTGGGTACTCTTGGATATGTTCCTGCTGCTTTACTTCAGTGAATGCAACAAATGTGATGAAAAAAAGGAGAG
AGGACTTCCTGCTGGAGATGTTCTAGAGCCAGTACAAAAGCCTCATGAAGGTCCTGGAGAAATGGGGAAACCAGT
CGTCATTCCTAAAGAGGATCAAGAAAAGATGAAAGAGATGTTTAAAATCAATCAGTTCAATTTAATGGCAAGTGA
GATGATTGCACTCAACAGATCTTTACCAGATGTTAGGTTAGAAGGGTGTAAAACAAAGGTGTATCCAGATAATCT
TCCTACAACAAGTGTGGTGATTGTTTTCCACAATGAGGCTTGGAGCACACTTCTGCGAACTGTCCATAGTGTCAT
TAATCGCTCACCAAGACACATGATAGAAGAAATTGTTCTAGTAGATGATGCCAGTGAAAGAGACTTTTTGAAAAG
GCCTTTAGAGAGTTATGTGAAAAAACTAAAAGTACCAGTTCATGTAATTCGAATGGAACAACGTTCTGGATTGAT
CAGAGCTAGATTAAAAGGAGCTGCTGTGTCTAAAGGCCAAGTGATCACCTTCCTGGATGCCCATTGTGAGTGTAC
AGTGGGATGGCTGGAGCCTCTCTTGGCCAGGATCAAACATGACAGGAGAACAGTGGTGTGTCCCATCATCGATGT
GATCAGTGATGATACTTTTGAGTACATGGCAGGCTCTGATATGACCTATGGTGGGTTCAACTGGAAGCTCAATTT
TCGCTGGTATCCTGTTCCCCAAAGAGAAATGGACAGAAGGAAAGGTGATCGGACTCTTCCTGTCAGGACACCTAC
CATGGCAGGAGGCCTTTTTTCAATAGACAGAGATTACTTTCAGGAAATTGGAACATATGATGCTGGAATGGATAT
TTGGGGAGGAGAAAACCTAGAAATTTCCTTTAGGATTTGGCAGTGTGGAGGAACTTTGGAAATTGTTACATGCTC
ACATGTTGGACATGTGTTTCGGAAAGCTACACCTTACACGTTTCCAGGAGGCACAGGGCAGATTATCAATAAAAA
TAACAGACGACTTGCAGAAGTGTGGATGGATGAATTCAAGAATTTCTTCTATATAATTTCTCCAGGTGTTACAAA
GGTAGATTATGGAGATATATCGTCAAGAGTTGGTCTAAGACACAAACTACAATGCAAACCTTTTTCCTGGTACCT
AGAGAATATATATCCTGATTCTCAAATTCCACGTCACTATTTCTCATGGGAGAGATACGAAATGTGGAAACGAA
TCAGTGTCTAGATAACATGGCTAGAAAAGAGAATGAAAAGTTGGAATTTTTAATTGCCATGGTATGGGGGGTAA
TCAGGTTTTCTCTTATACTGCCAACAAAGAAATTAGAACAGATGACCTTTGCTTGGATGTTTCCAAACTTAATGG
CCCAGTTACAATGCTCAAATGCCACCACCTAAAAGGCAACCAACTCTGGGAGTATGACCCAGTGAAATTAACCCT
GCAGCATGTGAACAGTAATCAGTGCCTGGATAAAGCCACAGAAGAGGATAGCCAGGTGCCCAGCATTAGAGACTG
CAATGGAAGTCGGTCCCAGCAGTGGCTTCTTCGAAACGTCACCCTGCCAGAAATATTC**TGA**GACCAAATTTACAA
AAAAACGAAAAAAATAAGGATTGACTGGGCTACCTCAGCATACATTTCTGCCACATTCTTAAGTAGCAAAAAAGG
AAAAGTGCTTTCCTCCTCTGCAGGATGTAAGGTTTATCAGCCATTAAAACTTAGACTTCTCTAGCTTTTCACTAG
CTGTGAACCAGCCTTCCTGTCCATGGACGTGAAACTGCATAGTAATGAGACTGTGCACACTGATGTTTACAAGAT
TGAAAGAGTCTTTCTCCGAAAATCATGGTAAAGAATACTGAGACAATGAAAAAAAATCAACAAAATATGCTTTCT
GGAGAACTGTACCTTCTATGGTTTGCTTGCACATCAGTAGTTTCTGCTGAACGTGCTGTCATAATGAAGAGATTT
CCAAGATTTTTTTTCCTGATTAGAACGGGTAGCCAGTATATTAAATATTGATAGAAAATAAAAGAACTGGAACC
AGATTCAGAATCTTGAAAACAACATTTTTTACAACAAACAAAAAAACTATATTAAACAGGGTTTAAAGGAAAATT
AAAACAGAACTATGAAGAAGTACAATTTGTTATAGTATAGTATCAAATTTCTATATAGATTTTATACCTCAGTGG
GGAAAAATAACTGATTCCAATGACATTCATTTTGTTTTCATCTGTGATAGTCATGGATGCTTTTATTTTCCTTGG
GGTGCTGAAATTGAGCTGAAAAAAAAGGCTCTTTGAATATAGTTTTAATTTCTCTCTACAGTTTTTTTTGTTTG
GTTTGTGGGCTGTTGGAATTGTAATTTTTAATTGCCTTCTAAAAAATGGAAATTTAACAATGTCTGATCTCAGCT
GAACAAATTAGATGTTTCAGTTGCTCTTGGGTCAACTGGCTTACAGATTTACATGTGCACACACACAAATTTC
TTATCACATTTTCGACTTCTTCACTTGACCTAACTGATTATGCGAAATACCCAAGATTCATGCTACTGTTCCACA
TTTGTTTTCACAGCAATAAATCTTCAGTTCTGTTGTTTATGATTCCACTTAACAAGGGGCCTGCAAATGTGATTT
ATTATTTGGGTATTTGGAGATAATACATTTGAGGGTTTTTGGAAAACCTTTTTCACTCCATACTCAAATATGCT
TCATTGTCAAATGCATATTTAAATTAAATTATTGAATTGTAATGTTTATCTGCTGCTTTTTTTAAATAAAATTTG
ACTGAAAATGTTTAATTGGCATTTTTTAATGACTTACCCAAGAAAGTGCAGCTATTATTCCATATTAATAGGCT
TGCATTTCTTTTCCTAAATCTTATTTAGGCTAAATCAGTTTTATTGTCCTCTGATTTTTTTAATACCACAGAAA
TCACCTGAGTGTCAATTGAAAAGTTGTCAATTAAAGGTAACCTTTTAACTCTCGTAGGAGGAATCTCATTAAGA
CATTTTTCCTGATATGTAGAGCAGTCTGTTGGCAAAAATGCATATATTTTCTTTCATATTTGTAAAATTATATTT
AATGGAATTCTTTTCTTTGATTATCAAGGACTTTCACTGCAGGCAGTGCTATTTCTTGTGCCTAAGAATGTTTCC
AAAAGTCGCATCGCTAATGATATTTGCCAAGTTGAGTGTACACAAAGTTTCTCATATCCTGTTCAAGTTAATCAA
CATCAAACACATGGGGATGCTTTAGGGTGAGTCTATAATACAAAATGCATAAACCATGTCCCCAGGAAATTTGAA
AGGAAGCAAGTGCTGAATGGAATTTTTTTCCTTTTCCATGAGCTGTGTTAATTCTATCTCCAGTAGGCCTAATGC
TTGAAATAAGCAAGATGTCTAATCAATAAATTATTTTCATGCTCAGAATTTCAGGTTTTTGTACTCCAGCATAGC

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FIGURE 354B

TTGGTCTTATTTCTTACTGTATGAAAGCTTAACAGCAATGTGATTTAAGGTTTTGTTTTAAATGGGAGATGTAAG
TGATTTAATTCATGGGTACTTTTAGAACCTGATAGATAATCCCATTGCCTTTATTTTTCTAATTAAAGAATCCTA
AATACTTTGAAAATACAAAATATTCCTG

FIGURE 355

MRKFAYCKVVLATSLIWVLLDMFLLLYFSECNKCDEKKERGLPAGDVLEPVQKPHEGPGEMGKPVVIPKEDQEKM
KEMFKINQFNLMASEMIALNRSLPDVRLEGCKTKVYPDNLPTTSVVIVFHNEAWSTLLRTVHSVINRSPRHMIEE
IVLVDDASERDFLKRPLESYVKKLKVPVHVIRMEQRSGLIRARLKGAAVSKGQVITFLDAHCECTVGWLEPLLAR
IKHDRRTVVCPIIDVISDDTFEYMAGSDMTYGGFNWKLNFRWYPVPQREMDRRKGDRTLPVRTPTMAGGLFSIDR
DYFQEIGTYDAGMDIWGGENLEISFRIWQCGGTLEIVTCSHVGHVFRKATPYTFPGGTGQIINKNNRRLAEVWMD
EFKNFFYIISPGVTKVDYGDISSRVGLRHKLQCKPFSWYLENIYPDSQIPRHYFSLGEIRNVETNQCLDNMARKE
NEKVGIFNCHGMGGNQVFSYTANKEIRTDDLCLDVSKLNGPVTMLKCHHLKGNQLWEYDPVKLTLQHVNSNQCLD
KATEEDSQVPSIRDCNGSRSQQWLLRNVTLPEIF

FIGURE 356

CCGGCCGGCCGAAGAGTTCACAAGTGTGAAGCCTGAAGCCGCCGGGTGCCGCTGTGTAGAAAGAAGCTAAAGCAC
TTCCAGAGCCTGCTGAGCTCAGAGGTTCGGAAGACTTATCGACC**ATG**GAGCGCGCGTCCTGCTTGTTGCTGCTGC
TGCTGCCGCTGGTGCACGTCTCTGCGACCACGCCAGAACCTTGTGAGCTGGACGATGAAGATTTCCGCTGCGTCT
GCAACTTCTCCGAACCTCAGCCCGACTGGTCCGAAGCCTTCCAGTGTGTGTCTGCAGTAGAGGTGGAGATCCATG
CCGGCGGTCTCAACCTAGAGCCGTTTCTAAAGCGCGTCGATGCGGACGCCGACCCGCGGCAGTATGCTGACACGG
TCAAGGCTCTCCGCGTGCGGCGGCTCACAGTGGGAGCCGCACAGGTTCCTGCTCAGCTACTGGTAGGCGCCCTGC
GTGTGCTAGCGTACTCCCGCCTCAAGGAACTGACGCTCGAGGACCTAAAGATAACCGGCACCATGCCTCCGCTGC
CTCTGGAAGCCACAGGACTTGCACTTTCCAGCTTGCGCCTACGCAACGTGTCGTGGGCGACAGGGCGTTCTTGGC
TCGCCGAGCTGCAGCAGTGGCTCAAGCCAGGCCTCAAGGTACTGAGCATTGCCCAAGCACACTCGCCTGCCTTTT
CCTGCGAACAGGTTCGCGCCTTCCCGGCCCTTACCAGCCTAGACCTGTCTGACAATCCTGGACTGGGCGAACGCG
GACTGATGGCGGCTCTCTGTCCCCACAAGTTCCCGGCCATCCAGAATCTAGCGCTGCGCAACACAGGAATGGAGA
CGCCCACAGGCGTGTGCGCCGCACTGGCGGCGGCAGGTGTGCAGCCCCACAGCCTAGACCTCAGCCACAACTCGC
TGCGCGCCACCGTAAACCCTAGCGCTCCGAGATGCATGTGGTCCAGCGCCCTGAACTCCCTCAATCTGTCGTTCG
CTGGGCTGGAACAGGTGCCTAAAGGACTGCCAGCCAAGCTCAGAGTGCTCGATCTCAGCTGCAACAGACTGAACA
GGGCGCCGCAGCCTGACGAGCTGCCCGAGGTGGATAACCTGACACTGGACGGGAATCCCTTCCTGGTCCCTGGAA
CTGCCCTCCCCCACGAGGGCTCAATGAACTCCGGCGTGGTCCCAGCCTGTGCACGTTCGACCCTGTCGGTGGGGG
TGTCGGGAACCCTGGTGCTGCTCCAAGGGGCCCGGGGCTTTGCC**TAA**GATCCAAGACAGAATAATGAATGGACTC
AAACTGCCTTGGCTTCAGGGGAGTCCCGTCAGGACGTTGAGGACTTTTCGACCAATTCAACCCTTTGCCCCACCT
TTATTAAAATCTTAAAC

FIGURE 357

MERASCLLLLLLPLVHVSATTPEPCELDDEDFRCVCNFSEPQPDWSEAFQCVSAVEVEIHAGGLNLEPFLKRVDA
DADPRQYADTVKALRVRRLTVGAAQVPAQLLVGALRVLAYSRLKELTLEDLKITGTMPPLPLEATGLALSSLRLR
NVSWATGRSWLAELQQWLKPGLKVLSIAQAHSPAFSCEQVRAFPALTSLDLSDNPGLGERGLMAALCPHKFPAIQ
NLALRNTGMETPTGVCAALAAAGVQPHSLDLSHNSLRATVNPSAPRCMWSSALNSLNLSFAGLEQVPKGLPAKLR
VLDLSCNRLNRAPQPDELPEVDNLTLDGNPFLVPGTALPHEGSMNSGVVPACARSTLSVGVSGTLVLLQGARGFA

FIGURE 358

CCGCCGGCCGGGGCGCCTGGCTGCACTCAGCGCCGGAGCCGGGAGCTAGCGGCCGCCGCC**ATG**TCCCACCAGACC
GGCATCCAAGCAAGTGAAGATGTTAAAGAGATCTTTGCCAGAGCCAGAAATGGAAAGTACAGACTTCTGAAAATA
TCTATTGAAAATGAGCAACTTGTGATTGGATCATATAGTCAGCCTTCAGATTCCTGGGATAAGGATTATGATTCC
TTTGTTTTACCCCTGTTGGAGGACAAACAACCATGCTATATATTATTCAGGTTAGATTCTCAGAATGCCCAGGGA
TATGAATGGATATTCATTGCATGGTCTCCAGATCATTCTCATGTTCGTCAAAAAATGTTGTATGCAGCAACAAGA
GCAACTCTGAAGAAGGAATTTGGAGGTGGCCACATTAAAGATGAAGTATTTGGAACAGTAAAGGAAGATGTATCA
TTACATGGATATAAAAAATACTTGCTGTCACAATCTTCCCCTGCCCCACTGACTGCAGCTGAGGAAGAACTACGA
CAGATTAAAATCAATGAGGTACAGACTGACGTGGGTGTGGACACTAAGCATCAAACACTACAAGGAGTAGCATTT
CCCATTTCTCGAGAAGCCTTTCAGGCTTTGGAAAAATTGAATAATAGACAGCTCAACTATGTGCAGTTGGAAATA
GATATAAAAAATGAAATTATAATTTTGGCCAACACAACAAATACAGAACTGAAAGATTTGCCAAAGAGGATTCCC
AAGGATTCAGCTCGTTACCATTTCTTTCTGTATAAACATTCCCATGAAGGAGACTATTTAGAGTCCATAGTTTTT
ATTTATTCAATGCCTGGATACACATGCAGTATAAGAGAGCGGATGCTGTATTCTAGCTGCAAGAGCCGTCTGCTA
GAAATTGTAGAAAGACAACTACAAATGGATGTAATTAGAAAGATCGAGATAGACAATGGGGATGAGTTGACTGCA
GACTTCCTTTATGAAGAAGTACATCCCAAGCAGCATGCACACAAGCAAAGTTTTGCAAAACCAAAAGGTCCTGCA
GGAAAAAGAGGAATTCGAAGACTAATTAGGGGCCCAGCGGAAACTGAAGCTACTACTGAT**TAA**AGTCATCACATT
AAACATTGTAATACTAGTTTTTTAAAAGTCCAGCTTTTAGTACAGGAGAACTGAAATCATTCCATGTTGATATAA
AGTAGGGAAAAAAATTGTACTTTTTGGAAAATAGCACTTTTCACTTCTGTGTGTTTTTAAAATTAATGTTATAGA
AGACTCATGATTTCTATTTTTGAGTTAAAGCTAGAAAAGGGGTTCAACATAATGTTTAATTTTGTCACACTGTTTT
CATAGCGTTGATTCCACACTTCAAATACTTCTTAAAATTTTATACAGTTGGGCCAGTTCTAGAAAGTCTGATGTC
TCAAAGGGTAAACTTACTACTTTCTTGTGGGACAGAAAGACCTTAAAATATTCATATTACTTAATGAATATGTTA
AGGACCAGGCTAGAGTATTTTCTAAGCTGGAAACTTAGTGTGCCTTGGAAAAGCCGCAAGTTGCTTACTCCGAGT
AGCTGTGCTAGCTCTGTCAGACTGTAGGATCATGTCTGCAACTTTTAGAAATAGTGCTTTATATTGCAGCAGTCT
TTTATATTTGACTTTTTTTTAATAGCATTAAAATTGCAGATCAGCTCACTCTGAAACTTTAAGGGTACCAGATAT
TTTCTATACTGCAGGATTTCTGATGACATTGAAAGACTTTAAACAGCCTTAGTAAATTATCTTTCTAATGCTCTG
TGAGGCCAAACATTTATGTTCAGATTGAAATTTAAATTAATATCATTCAAAAGGAAACAAAAAATGTTGAGTTTT
AAAAATCAGGATTGACTTTTTTCTCCAAAACCATACATTTATGGGCAAATTGTGTTCTTTATCACTTCCGAGCAA
ATACTCAGATTTAAAATTACTTTAAAGTCCTGGTACTTAACAGGCTAACGTAGATAAACACCTTAATAATCTCAG
TTAATACTGTATTTCAAAACACATTTAACTGTTTTCTAATGCTTTGCATTATCAGTTACAACCTAGAGAGATTTT
GAGCCTCATATTTCTTTGATACTTGAAATAGAGGGAGCTAGAACACTTAATGTTTAATCTGTTAAACCTGCTGCA
AGAGCCATAACTTTGAGGCATTTTCTAAATGAACTGTGGGGATCCAGGATTTGTAATTTCTTGATCTAAACTTTA
TGCTGCATAAATCACTTATCGGAAATGCACATTTCATAGTGTGAAGCACTCATTTCTAAACCTTATTATCTAAGG
TAATATATGCACCTTTCAGAAATTTGTGTTCGAGTAAGTAAAGCATATTAGAATAATTGTGGGTTGACAGATTTT
TAAAATAGAATTTAGAGTATTTGGGGTTTTGTTTGTTTACAAATAATCAGACTATAATATTTAAACATGCAAAAT
AACTGACAATAATGTTGCACTTGTTTACTAAAGATATAAGTTGTTCCATGGGTGTACACGTAGACAGACACACAT
ACACCCAAATTATTGCATTAAGAATCCTGGAGCAGACCATAGCTGAAGCTGTTATTTTCAGTCAGGAAGACTACC
TGTCATGAAGGTATAAAATAATTTAGAAGTGAATGTTTTCTGTACCATCTATGTGCAATTATACTCTAAATTCC
ACTACACTACATTAAAGTAAATGGACATTCCAGAATATAGATGTGATTATAGTCTTAAACTAATTATTATTAAAC
CAATGATTGCTGAAAATCAGTGATGCATTTGTTATAGAGTATAACTCATCGTTTACAGTATGTTTTAGTTGGCAG
TATCATACCTAGATGGTGAATAACATATTCCCAGTAAATTTATATAGCAGTGAAGAATTACATGCCTTCTGGTGG
ACATTTTATAAGTGCATTTTATATCACAATAAAAATTTTTTCTCTTTAAAAAAAAAAAAACAAGAAAAAAAAAAA

FIGURE 359

MSHQTGIQASEDVKEIFARARNGKYRLLKISIENEQLVIGSYSQPSDSWDKDYDSFVLPLLEDKQPCYILFRLDS
QNAQGYEWIFIAWSPDHSHVRQKMLYAATRATLKKEFGGGHIKDEVFGTVKEDVSLHGYKKYLLSQSSPAPLTAA
EEELRQIKINEVQTDVGVDTKHQTLQGVAFPISREAFQALEKLNNRQLNYVQLEIDIKNEIIILANTTNTELKDL
PKRIPKDSARYHFFLYKHSHEGDYLESIVFIYSMPGYTCSIRERMLYSSCKSRLLEIVERQLQMDVIRKIEIDNG
DELTADFLYEEVHPKQHAHKQSFAKPKGPAGKRGIRRLIRGPAETEATTD

FIGURE 360

GTCCGCGTCGCTAGCTAGTCGTTCTGAAGCGGCGGCCAGAGAAGAGTCAAGGGCACGAGCATCGGGTAGCC**ATG**C
CTTTCTTGGACATCCAGAAAAGGTTCGGCCTTAACATAGATCGATGGTTGACAATCCAGAGTGGTGAACAGCCCT
ACAAGATGGCTGGTCGATGCCATGCTTTTGAAAAAGAATGGATAGAATGTGCACATGGAATCGGTTATACTCGGG
CAGAGAAAGAGTGCAAGATAGAATATGATGATTTCGTAGAGTGTTTGCTTCGGCAGAAAACGATGAGACGTGCAG
GTACCATCAGGAAGCAGCGGGATAAGCTGATAAAGGAAGGAAAGTACACCCCTCCACCTCACCACATTGGCAAGG
GGGAGCCTCGGCCC**TGA**ACAGAGCAGCTGCTGATGTCTGGAGGCTGATTTTCCTGTTCTCTGTTCTCCACTGGAA
AGGTTGTTTACGACAAACCTCCTTGTCAAAGTGTGTAAAAATAAAGGATTGCTCCATCCTAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAA

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FIGURE 361

MPFLDIQKRFGLNIDRWLTIQSGEQPYKMAGRCHAFEKEWIECAHGIGYTRAEKECKIEYDDFVECLLRQKTMRR
AGTIRKQRDKLIKEGKYTPPPHHIGKGEPRP

FIGURE 362

CGGACGCGTGGGGCCCGGGGGGCTGAGGCGCCCGCCGCCTGCCGCGGGGGCCGCTCGCGTCCTCC**ATG**GAGGCCG
GAGAGGAACCGCTGCTGCTGGCCGAACTCAAGCCCGGGCGCCCCCACCAGTTTGATTGGAAGTCCAGCTGTGAAA
CCTGGAGCGTCGCCTTCTCCCCAGATGGCTCCTGGTTTGCTTGGTCTCAAGGACACTGCATCGTCAAACTGATCC
CCTGGCCGTTGGAGGAGCAGTTCATCCCTAAAGGGTTTGAAGCCAAAAGCCGAAGTAGCAAAAATGAGACGAAAG
GGCGGGGCAGCCCAAAAGAGAAGACGCTGGACTGTGGTCAGATTGTCTGGGGGCTGGCCTTCAGCCCGTGGCCTT
CCCCACCCAGCAGGAAGCTCTGGGCACGCCACCACCCCCAAGTGCCCGATGTCTCTTGCCTGGTTCTTGCTACGG
GACTCAACGATGGGCAGATCAAGATCTGGGAGGTGCAGACAGGGCTCCTGCTTTTGAATCTTTCCGGCCACCAAG
ATGTCGTGAGAGATCTGAGCTTCACACCCAGTGGCAGTTTGATTTTGGTCTCCGCGTCACGGGATAAGACTCTTC
GCATCTGGGACCTGAATAAACACGGTAAACAGATTCAAGTGTTATCGGGCCACCTGCAGTGGGTTTACTGCTGTT
CCATCTCCCCAGACTGCAGCATGCTGTGCTCTGCAGCTGGAGAGAAGTCGGTCTTTCTATGGAGCATGAGGTCCT
ACACGTTAATTCGGAAGCTAGAGGGCCATCAAAGCAGTGTTGTCTCTTGTGACTTCTCCCCCGACTCTGCCCTGC
TTGTCACGGCTTCTTACGATACCAATGTGATTATGTGGGACCCCTACACCGGCGAAAGGCTGAGGTCACTCCACC
ACACCCAGGTTGACCCCGCCATGGATGACAGTGACGTCCACATTAGCTCACTGAGATCTGTGTGCTTCTCTCCAG
AAGGCTTGTACCTTGCCACGGTGGCAGATGACAGACTCCTCAGGATCTGGGCCCTGGAACTGAAAACTCCCATTG
CATTTGCTCCTATGACCAATGGGCTTTGCTGCACATTTTTTCCACATGGTGGAGTCATTGCCACAGGGACAAGAG
ATGGCCACGTCCAGTTCTGGACAGCTCCTAGGGTCCTGTCCTCACTGAAGCACTTATGCCGGAAAGCCCTTCGAA
GTTTCCTAACAACTTACCAAGTCCTAGCACTGCCAATCCCCAAGAAATGAAAGAGTTCCTCACATACAGGACTT
TT**TAA**GCAACACCACATCTTGTGCTTCTTTGTAGCAGGGTAAATCGTCCTGTCAAAGGGAGTTGCTGGAATAATG
GGCCAAACATCTGGTCTTGCATTGAAATAGCATTTCTTTGGGATTGTGAATAGAATGTAGCAAAACCAGATTCCA
GTGTACTAGTCATGGATCTTTCTCTCCCTGGCATGTGAAAGTCAGTCTTAGAGGAAGAGATTCCACTTGCACGGC
AACAGAGCCTTACGTTAAATTTTCAGTCCAGTTATGAACAGCAAGTGTTGAACTCTTTCTGCTTGTTTTGATTCA
·AAGTGCAGTTACTGATGTTGTTTTGATTATGCAACTAAGTAGGCCTCCAGAGCCTCTCTAGTGGCAGAGCAGCTC
ACACTCCCTCCGCTGGGAACGATGGCTTCTGCCTAGTACCTATCCTTGTGTTTCTGATGCAGTGGTAGCATTGGT
TCAAGTTCTCTCCTGCTGTGGTCAGAGTTGCTTCGATGTTGGCCAAGTGCTTTTCTTCTTGGGCTCCCTTCTGAC
CTGCAGGACAGTTTTCCTGGAGCCATTTGGTATGAGGTATTAATTTAGCTTAACTAAATTACAGGGGACTCAGAG
GCCGTGCTCCTGACCGATCCAGACACTATTACTGGCTTTTTTTTTTTTTAACAATGGTGTGCATGTGCAGGAAA
TGACAAATTTGTATGTCAGATTATACAAGGATGTATTCTTAAACCGCATGACTATTCAGATGGCTACTGAGTTAT
CAGTGGCCATTTATTAGCATCATATTTATTTGTATTTTCTCAACAGATGTTAAGGTACAACTGTGTTTTTCTCGA
TTATCTAAAAACCATAGTACTTAAATTGAACAGTTGCAAAGATGTCTTAATTGTGTAAAGAATTGGTGTAGTCAT
GACTTTAGCTGATACTCTTATGTACGAGATCTGTCTCTGCTGTTAACTTCATTGGATTAATCAGCTGGTTTCAA
CTCTACTGCGAAACAAAAATAGCTCCTTAAAAGTACTGTTCTCCTTCAGTGGCATGTAGTTATCTAATCAAGACA
CCTCATTCAAACAAAACCTGCCTTAGGAAAATTTAATATATTTTAAATTATTTTAAAAGAAATACAACATCTTAT
TCTTTAGCTTTCTTAATCGGTGCTTTATGGAGGCCAGTGTAACGTTACATGACTCGTTGAGAAAGTTGAGGAATT
TCCTCTACCACCTTTGTTGCTTGAAGAAAACATGTCTTTTCAAAATGAGAGGCTTTCATTGAAGAAAAGAAAAA
AACAACAGTTAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 363

MEAGEEPLLLAELKPGRPHQFDWKSSCETWSVAFSPDGSWFAWSQGHCIVKLIPWPLEEQFIPKGFEAKSRSSKN
ETKGRGSPKEKTLDCGQIVWGLAFSPWPSPPSRKLWARHHPQVPDVSCLVLATGLNDGQIKIWEVQTGLLLLNLS
GHQDVVRDLSFTPSGSLILVSASRDKTLRIWDLNKHGKQIQVLSGHLQWVYCCSISPDCSMLCSAAGEKSVFLWS
MRSYTLIRKLEGHQSSVVSCDFSPDSALLVTASYDTNVIMWDPYTGERLRSLHHTQVDPAMDDSDVHISSLRSVC
FSPEGLYLATVADDRLLRIWALELKTPIAFAPMTNGLCCTFFPHGGVIATGTRDGHVQFWTAPRVLSSLKHLCRK
ALRSFLTTYQVLALPIPKKMKEFLTYRTF

FIGURE 364

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ATATAACCGCGTGGCCCGCGCGCGCGCTTCCCTCCCGGCGCAGTCACCGGCGCGGTCTATGGCTGCGACTTCTCT
AATGTCTGCTTTGGCTGCCCGGCTGCTGCAGCCCGCGCACAGCTGCTCCCTTCGCCTTCGCCCTTTCCACCTCGC
GGCAGTTCGAAATGAAGCTGTTGTCATTTCTGGAAGGAAACTGGCCCAGCAGATCAAGCAGGAAGTGCGGCAGGA
GGTAGAAGAGTGGGTGGCCTCAGGCAACAAACGGCCACACCTGAGTGTGATCCTGGTTGGCGAGAATCCTGCAAG
TCACTCCTATGTCCTCAACAAAACCAGGGCAGCTGCAGTTGTGGGAATCAACAGTGAGACAATTATGAAACCAGC
TTCAATTTCAGAGGAAGAATTGTTGAATTTAATCAATAAACTGAATAATGATGATAATGTAGATGGCCTCCTTGT
TCAGTTGCCTCTTCCAGAGCATATTGATGAGAGAAGGATCTGCAATGCTGTTTCTCCAGACAAGGATGTTGATGG
CTTTCATGTAATTAATGTAGGACGAATGTGTTTGGATCAGTATTCCATGTTACCGGCTACTCCATGGGGTGTGTG
GGAAATAATCAAGCGAACTGGCATTCCAACCCTAGGGAAGAATGTGGTTGTGGCTGGAAGGTCAAAAAACGTTGG
AATGCCCATTGCAATGTTACTGCACACAGATGGGGCGCATGAACGTCCCGGAGGTGATGCCACTGTTACAATATC
TCATCGATATACTCCCAAAGAGCAGTTGAAGAAACATACAATTCTTGCAGATATTGTAATATCTGCTGCAGGTAT
TCCAAATCTGATCACAGCAGATATGATCAAGGAAGGAGCAGCAGTCATTGATGTGGGAATAAATAGAGTTCACGA
TCCTGTAACTGCCAAACCCAAGTTGGTTGGAGATGTGGATTTTGAAGGAGTCAGACAAAAAGCTGGGTATATCAC
TCCAGTTCCTGGAGGTGTTGGCCCCATGACAGTGGCAATGCTAATGAAGAATACCATTATTGCTGCAAAAAAGGT
GCTGAGGCTTGAAGAGCGAGAAGTGCTGAAGTCTAAAGAGCTTGGGGTAGCCACTAATTAACTACTGTGTCTTCT
GTGTCACAAACAGCACTCCAGGCCAGCTCAAGAAGCAAAGCAGGCCAATAGAAATGCAATATTTTTAATTTATTC
TACTGAAATGGTTTAAAATGATGCCTTGTATTTATTGAAAGCTTAAATGGGTGGGTGTTTCTGCACATACCTCTG
CAGTACCTCACCAGGGAGCATTCCAGTATCATGCAGGGTCCTGTGATCTAGCCAGGAGCAGCCATTAACCTAGTG
ATTAATATGGGAGACATTACCATATGGAGGATGGATGCTTCACTTTGTCAAGCACCTCAGTTACACATTCGCCTT
TTCTAGGATTGCATTTCCCAAGTGCTATTGCAATAACAGTTGATACTCATTTTAGGTACCAGACCTTTTGAGTTC
AACTGATCAAACCAAAGGAAAAGTGTTGCTAGAGAAAATTGGGGAAAAGGTGAAAAGAAAAAATGGTAGTAATT
GAGCAGAAAAAAATTAATTTATATATGTATTGATTGGCAACCAGATTTATCTAAGTAGAACTGAATTGGCTAGGA
AAAAAGAAAAACTGCATGTTAATCATTTTCCTAAGCTGTCCTTTTGAGGCTTAGTCAGTTTATTGGGAAAATGTT
TAGGATTATTCCTTGCTATTAGTACTCATTTTATGTATGTTACCCTTCAGTAAGTTCTCCCCATTTTAGTTTTCT
AGGACTGAAAGGATTCTTTTCTACATTATACATGTGTGTTGTCATATTGGCTTTTGCTATATACTTTAACTTCA
TTGTTAAATTTTTGTATTGTATAGTTTCTTTGGTGTATCTTAAAACCTATTTTTGAAAAACAAACTTGGCTTGAT
AATCATTTGGGCAGCTTGGGTAAGTACGCAACTTACTTTTCCACCAAAGAACTGTCAGCAGCTGCCTGCTTTTCT
GTGATGTATGTATCCTGTTGACTTTTCCAGAAATTTTTAAGAGTTTGAGTTACTATTGAATTTAATCAGACTTT
CTGATTAAAGGGTTTTCTTTCTTTTTTAATAAAACACATCTGTCTGGTATGGTA
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FIGURE 365

MSALAARLLQPAHSCSLRLRPFHLAAVRNEAVVISGRKLAQQIKQEVRQEVEEWVASGNKRPHLSVILVGENPAS
HSYVLNKTRAAAVVGINSETIMKPASISEEELLNLINKLNNDDNVDGLLVQLPLPEHIDERRICNAVSPDKDVDG
FHVINVGRMCLDQYSMLPATPWGVWEIIKRTGIPTLGKNVVVAGRSKNVGMPIAMLLHTDGAHERPGGDATVTIS
HRYTPKEQLKKHTILADIVISAAGIPNLITADMIKEGAAVIDVGINRVHDPVTAKPKLVGDVDFEGVRQKAGYIT
PVPGGVGPMTVAMLMKNTIIAAKKVLRLEEREVLKSKELGVATN

FIGURE 366

GGTAGTTGGTTGTGGGCACTGGGTTAGAGGTATCACGTGGGGGCACTTTCGTCTTAGCTTTTGGACAAGACGCAG
GCGCAACCCACGGCTGCTGCGGGGATCCTTGTGGCCCTTCCGGTCGGTGGAACCAATCCGTGCACAGAGAAGCGG
GGCGAACTGAGGCGAGTGAAGTGGACTCTGAGGGCTACCGCTACCGCCACTGCTGCGGCAGGGGCGTGGAGGGCA
GAGGGCCGCGGAGGCCGCAGTTGCAAAC**ATG**GCTCAGAGCAGAGACGGCGGAAACCCGTTCGCCGAGCCCAGCGA
GCTTGACAACCCCTTTCAGGACCCAGCTGTGATCCAGCACCGACCCAGCCGGCAGTATGCCACGCTTGACGTCTA
CAACCCTTTTGAGACCCGGGAGCCACCACCAGCCTATGAGCCTCCAGCCCCTGCCCCATTGCCTCCACCCTCAGC
TCCCTCCTTGCAGCCCTCGAGAAAGCTCAGCCCCACAGAACCTAAGAACTATGGCTCATACAGCACTCAGGCCTC
AGCTGCAGCAGCCACAGCTGAGCTGCTGAAGAAACAGGAGGAGCTCAACCGGAAGGCAGAGGAGTTGGACCGAAG
GGAGCGAGAGCTGCAGCATGCTGCCCTGGGGGGCACAGCTACTCGACAGAACAATTGGCCCCCTCTACCTTCTTT
TTGTCCAGTTCAGCCCTGCTTTTTCCAGGACATCTCCATGGAGATCCCCCAAGAATTTCAGAAGACTGTATCCAC
CATGTACTACCTCTGGATGTGCAGCACGCTGGCTCTTCTCCTGAACTTCCTCGCCTGCCTGGCCAGCTTCTGTGT
GGAAACCAACAATGGCGCAGGCTTTGGGCTTTCTATCCTCTGGGTCCTCCTTTTCACTCCCTGCTCCTTTGTCTG
CTGGTACCGCCCCATGTATAAGGCTTTCCGGAGTGACAGTTCATTCAATTTCTTCGTTTTCTTCTTCATTTTCTT
CGTCCAGGATGTGCTCTTTGTCCTCCAGGCCATTGGTATCCCAGGTTGGGGATTCAGTGGCTGGATCTCTGCTCT
GGTGGTGCCGAAGGGCAACACAGCAGTATCCGTGCTCATGCTGCTGGTCGCCCTGCTCTTCACTGGCATTGCTGT
GCTAGGAATTGTCATGCTGAAACGGATCCACTCCTTATACCGCCGCACAGGTGCCAGCTTTCAGAAGGCCCAGCA
AGAATTTGCTGCTGGTGTCTTCTCCAACCCTGCGGTGCGAACCGCAGCTGCCAATGCAGCCGCTGGGGCTGCTGA
AAATGCCTTCCGGGCCCCG**TGA**CCCTGACTGGGATGCCCTGGCCCTGCTACTTGAGGGAGCTGACTTAGCTCCC
GTCCCTAAGGTCTCTGGGACTTGGAGAGACATCACTAACTGATGGCTCCTCCGTAGTGCTCCCAATCCTATGGCC
ATGACTGCTGAACCTGACAGGCGTGTGGGGAGTTCACTGTGACCTAGTCCCCCCATCAGGCCACACTGCTGCCAC
CTCTCACACGCCCCAACCCAGCTTCCCTCTGCTGTGCCACGGCTGTTGCTTCGGTTATTTAAATAAAAAGAAAGT
GGAACTGGAACTGACAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 367

MAQSRDGGNPFAEPSELDNPFQDPAVIQHRPSRQYATLDVYNPFETREPPPAYEPPAPAPLPPPSAPSLQPSRKL
SPTEPKNYGSYSTQASAAAATAELLKKQEELNRKAEELDRRERELQHAALGGTATRQNNWPPLPSFCPVQPCFFQ
DISMEIPQEFQKTVSTMYYLWMCSTLALLLNFLACLASFCVETNNGAGFGLSILWVLLFTPCSFVCWYRPMYKAF
RSDSSFNFFVFFFIFFVQDVLFVLQAIGIPGWGFSGWISALVVPKGNTAVSVLMLLVALLFTGIAVLGIVMLKRI
HSLYRRTGASFQKAQQEFAAGVFSNPAVRTAAANAAAGAAENAFRAP

FIGURE 368

GAATTCCGGGTTTGAAAAGGAGTTCTAGGGAAGAAGAGAGTTAGTTAGCACATCAATGGGAGCAGGGCTCTTACC
CCACGTGGTGTTACATATATATTATTTTCATACATGGTTTCTGGCTCATAAGTTCCTTAGCCCTTGCTATAGTCT
TTTGTGTTCGGTCTTAAGGGCAGGACTGTACTCTTCCCTCACCTTTCTAATTGTGCATCTTAAGACCTTCCCCAG
AGAGGGTGGTGCCCTGTAGTTGTGGGAAGGAATGCTGGCATCATGAAGCTTCCATAAAAACCCGAGAAACGAGCT
TCTGGATAGCTGGACACATGGAGGTCCTGGAGGGTGGAGCCCAGGGAGGCATGGAAGCTCCACAGCCCTTCCCCC
ATACCTTACCCTATTTCCTCTGTATCCTTTGTAATATCCTTTATGATAAACCAGCAAATGTGTGTAAATGTTTCC
CTAAGGTCTGTGGCCACTCCAGCAAATTAATTGAACCTAAAGAGGGGGTCGTGGGAACCCCAACTTGAAGCCAGT
CAGTCAGAAGTTCTGGATGTCCAGACTTCAGACTGGTGTCTGAAAGGGTGGAGGCAGTCTTGGGGACCGAGCCCC
CAATCTATGGGATCTGACACTATCTCCAGTAGTGTTGGAATTGAGTCACCAGCGTGTCCACTGGTTAGTGTGTGA
GAAACTCCCTACCATTGGTCACAGAAGTCTTCTTCTGTGTTGATAGTTGTAGTGTGACAGCAGAGGAAAAACAAA
GTCAGAAAGAGTTTTCCCGAACACACCCAATTTCTCCATTTTACTATCCATTTCCACAAACACTGACTACAATAG
AAGTATAAAAATTACTCCACTGCATCATTCAGCTTTCCATCTCTCTCAGACACCAAGCTGCAGATCCAGGTCACT
TTGTAGGTCACCACCTAGAGGGGAGGAAGACCTCGCTTTGGAGAGTGGGAATAAAACGCTCGTGGAAAAGGGTAC
ACGCTTTTCTGGGAAAGTGAGGCCACC**ATG**GCTCTGGAGAAGTCTCTTGTCCGGCTCCTTCTGCTTGTCCTGATA
CTGCTGGTGCTGGGCTGGGTCCAGCCTTCCCTGGGCAAGGAATCCCGGGCCAAGAAATTCCAGCGGCAGCATATG
GACTCAGACAGTTCCCCCAGCAGCAGCTCCACCTACTGTAACCAAATGATGAGGCGCCGGAATATGACACAGGGG
CGGTGCAAACCAGTGAACACCTTTGTGCACGAGCCCCTGGTAGATGTCCAGAATGTCTGTTTCCAGGAAAAGGTC
ACCTGCAAGAACGGGCAGGGCAACTGCTACAAGAGCAACTCCAGCATGCACATCACAGACTGCCGCCTGACAAAC
GGCTCCAGGTACCCCAACTGTGCATACCGGACCAGCCCGAAGGAGAGACACATCATTGTGGCCTGTGAAGGGAGC
CCATATGTGCCAGTCCACTTTGATGCTTCTGTGGAGGACTCTACC**TAA**GGTCAGAGCAGCGAGATACCCCACCTC
CCTCAACCTCATCCTCTCCACAGCTGCCTCTTCCCTCTTCCTTCCCTGCTGTGAAAGAAGTAACTACAGTTAGGG
CTCCTATTCAACACACACATGCTTCCCTTTCCTGAGCCGGAATTC

FIGURE 369

MALEKSLVRLLLLVLILLVLGWVQPSLGKESRAKKFQRQHMDSDSSPSSSSTYCNQMMRRRNMTQGRCKPVNTFV
HEPLVDVQNVCFQEKVTCKNGQGNCYKSNSSMHITDCRLTNGSRYPNCAYRTSPKERHIIVACEGSPYVPVHFDA
SVEDST

FIGURE 370A

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CTTCTCTCCCAGGGCGGTGCGACCCGGAGCTCCAGCGCCCGAGTCTCCACTTCGTTTGCTGAAACTTGCTTTCTA
CCAGCTAAGAACCATGCTGCGAGTGATTGTGGAATCTGCCAGCAATATCCCTAAAACGAAATTTGGCAAGCCGGA
TCCTATTGTTTCTGTCATTTTTAAGGATGAGAAAAAGAAAACAAAGAAAGTTGATAATGAATTGAACCCTGTCTG
GAATGAGATTTTGGAGTTTGACTTGAGGGGTATACCACTGGACTTTTCATCTTCCCTTGGGATTATTGTGAAAGA
TTTTGAGACAATTGGACAAAATAAATTAATTGGCACGGCGACTGTAGCCCTGAAGGACCTGACTGGTGACCAGAG
CAGATCCCTGCCGTACAAGCTGATCTCCCTGCTAAATGAAAAAGGGCAAGATACTGGGGCCACCATTGACTTGGT
GATCGGCTATGATCCGCCTTCTGCTCCACATCCAAATGACCTGAGCGGGCCCAGCGTGCCAGGCATGGGAGGAGA
TGGGGAAGAAGATGAAGGTGATGAAGACAGGTTGGACAATGCAGTCAGGGGCCCTGGGCCCAAGGGGCCAGTTGG
GACGGTGTCGGAAGCTCAGCTTGCTCGGAGGCTCACCAAAGTAAAGAACAGCCGGCGGATGCTGTCAAATAAGCC
ACAGGACTTCCAGATCCGCGTCCGAGTGATTGAGGGCCGACAGTTAAGTGGTAACAACATAAGGCCTGTGGTCAA
AGTTCACGTCTGTGGCCAGACACACCGAACAAGAATCAAGAGAGGAAACAACCCTTTTTTTGATGAGTTGTTTTT
CTACAATGTCAACATGACCCCTTCTGAATTGATGGATGAGATCATCAGCATCCGGGTTTATAATTCTCACTCTCT
GCGGGCAGATTGTCTGATGGGGGAATTTAAGATTGATGTTGGATTTGTTTATGATGAACCTGGCCATGCTGTCAT
GAGAAAGTGGCTTCTTCTCAATGACCCGGAAGATACCAGTTCAGGTTCTAAAGGTTATATGAAAGTCAGCATGTT
TGTCCTGGGAACCGGAGATGAGCCTCCTCCTGAGAGACGAGATCGTGATAATGACAGTGATGATGTGGAGAGTAA
TTTGTTACTCCCTGCTGGCATTGCCCTCCGGTGGGTGACCTTCTTGCTGAAAATCTACCGAGCTGAGGACATCCC
CCAGATGGATGATGCCTTCTCACAGACAGTAAAGGAAATATTTGGAGGCAATGCAGATAAGAAAAATCTCGTGGA
TCCTTTTGTAGAAGTTTCCTTTGCTGGAAAAAAGGTTTGTACAAACATAATTGAGAAAAATGCAAACCCAGAGTG
GAATCAGGTCGTCAATCTTCAGATCAAGTTTCCTTCAGTGTGTGAAAAAATAAAACTAACAATATATGACTGGGA
CCGTCTTACTAAAAATGATGTAGTTGGAACAACATATCTACACCTCTCTAAAATTGCTGCCTCTGGTGGGGAAGT
GGAAGATTTCTCATCTTCGGGAACTGGGGCTGCATCATATACAGTAAACACAGGAGAAACAGAGGTAGGCTTTGT
TCCAACGTTTGGACCTTGTTACCTGAATCTTTATGGAAGCCCCAGGGAGTACACGGGATTCCCAGACCCCTATGA
TGAGCTGAATACTGGAAAGGGGGAAGGAGTTGCCTACAGAGGCAGGATCTTGGTTGAATTAGCCACTTTTCTTGA
GAAGACACCACCAGATAAAAAGCTTGAGCCCATTTCAAATGATGACCTGCTGGTTGTTGAGAAATACCAGCGAAG
GCGGAAGTACAGCCTGTCTGCCGTGTTTCATTCAGCCACCATGTTGCAAGATGTTGGTGAGGCCATTCAGTTTGA
AGTCAGCATTGGGAACTATGGCAACAAGTTTGACACCACCTGTAAGCCTTTGGCATCAACAACTCAGTACAGCCG
TGCTGTATTTGATGGCAACTACTATTATTACTTGCCTTGGGCCCACACCAAGCCAGTTGTTACCCTGACTTCATA
CTGGGAGGATATTAGTCATCGCCTGGATGCGGTGAACACTCTCCTAGCTATGGCAGAACGGCTGCAAACAAATAT
AGAAGCTCTAAAATCAGGGATACAAGGTAAAATTCCTGCAAACCAGCTGGCTGAATTGTGGCTGAAGCTGATAGA
TGAAGTTATAGAAGACACGAGATACACGTTGCCTCTCACAGAAGGAAAAGCCAACGTCACAGTTCTCGATACTCA
GATCCGAAAGCTGCGGTCCAGGTCTCTCTCCCAAATACATGAGGCGGCTGTGAGGATGAGGTCGGAAGCCACAGA
TGTGAAGTCCACACTGGCAGAAATTGAGGACTGGCTTGATAAATTAATGCAGCTGACTGAAGAGCCACAGAACAG
CATGCCTGACATCATCATCTGGATGATCCGGGGAGAGAAGAGACTGGCCTATGCACGAATTCCCGCACATCAGGT
CTTGTACTCCACCAGTGGTGAGAATGCATCTGGAAAATACTGTGGGAAAACCCAAACCATCTTTCTGAAGTATCC
ACAGGAGAAAAACAACGGGCCAAAGGTGCCTGTGGAGTTGCGAGTGAACATCTGGCTAGGCTTAAGTGCTGTGGA
GAAGAAGTTTAACAGCTTCGCAGAAGGAACTTTCACCGTCTTTGCTGAAATGTATGAAAATCAAGCTCTCATGTT
TGGAAAATGGGGTACTTCTGGATTAGTAGGACGTCATAAGTTTTCTGATGTCACAGGAAAAATAAAACTCAAGAG
GGAATTTTTTCTGCCTCCAAAAGGCTGGGAATGGGAAGGAGAGTGGATAGTTGATCCTGAAAGAAGCTTGCTGAC
TGAGGCAGATGCAGGTCACACGGAGTTCACTGATGAAGTCTATCAGAACGAGAGCCGCTACCCCGGGGGCGACTG
GAAGCCGGCCGAGGACACCTACACGGATGCGAACGGCGATAAAGCAGCATCACCCAGCGAGTTGACTTGTCCTCC
AGGTTGGGAATGGGAAGATGATGCATGGTCTTATGACATAAATCGAGCGGTGGATGAGAAGGCTGGGAATATGG
AATCACCATTCCTCCTGATCATAAGCCCAAATCCTGGGTTGCAGCAGAGAAAATGTACCACACTCATAGACGGCG
AAGGCTGGTCCGAAAACGCAAGAAAGATTTAACACAGACTGCTTCAAGCACCGCAAGGGCCATGGAGGAATTGCA
AGACCAAGAGGGCTGGGAATATGCTTCTCTAATTGGCTGGAAATTTCACTGGAAACAACGTAGTTCAGATACCTT
CCGCCGCAGACGCTGGAGGAGAAAAATGGCTCCTTCAGAAACACATGGTGCAGCTGCCATCTTTAAACTTGAAGG
TGCCCTTGGGGCAGACACTACCGAAGATGGGGATGAGAAGAGCCTGGAGAAACAGAAGCACAGTGCCACCACTGT
GTTCGGAGCAAACACCCCCATTGTTTCCTGCAATTTTGACAGAGTCTACATCTACCATCTGCGCTGCTATGTCTA
TCAAGCCAGAAACCTCTTGGCTTTAGATAAGGATAGCTTTTCAGATCCATATGCTCATATCTGTTTCCTCCATCG
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FIGURE 370B

GAGCAAAACCACTGAGATCATCCATTCAACCCTGAATCCCACGTGGGACCAAACAATTATATTCGATGAAGTTGA
AATCTATGGGGAACCCCAAACAGTTCTACAGAATCCACCCAAAGTTATCATGGAACTTTTTGACAATGACCAAGT
GGGCAAAGATGAATTTTTAGGACGAAGCATTTTCTCTCCTGTGGTGAAACTGAACTCAGAAATGGACATCACACC
CAAACTTCTCTGGCACCCAGTAATGAATGGAGACAAAGCCTGCGGGGATGTTCTTGTAACTGCAGAGCTGATTCT
GAGGGGCAAGGATGGCTCCAACCTTCCCATTCTTCCCCCTCAAAGGGCGCCAAATCTATACATGGTCCCCCAGGG
GATCAGGCCTGTGGTCCAGCTCACTGCCATTGAGATTCTAGCTTGGGGCTTAAGAAATATGAAAAACTTCCAGAT
GGCTTCTATCACATCCCCCAGTCTTGTTGTGGAGTGTGGAGGAGAAAGGGTGGAATCGGTGGTGATCAAAAACCT
TAAGAAGACACCCAACTTTCCAAGTTCTGTTCTCTTCATGAAAGTGTTCTTGCCCAAGGAGGAATTGTACATGCC
CCCACTGGTGATCAAGGTCATCGACCACAGGCAGTTTGGGCGGAAGCCTGTCGTCGGCCAGTGCACCATCGAGCG
CCTGGACCGCTTTCGCTGTGACCCTTATGCAGGGAAAGAGGACATCGTCCCACAGCTCAAAGCCTCCCTTCTGTC
TGCCCCACCATGCCGGGACATCGTTATCGAAATGGAAGACACCAAACCATTACTGGCTTCTAAGCTGACAGAAAA
GGAGGAAGAAATCGTGGACTGGTGGAGTAAATTTTATGCTTCCTCAGGGGAACATGAAAAATGCGGACAGTATAT
TCAGAAAGGCTATTCCAAGCTCAAGATATATAATTGTGAACTAGAAATGTAGCAGAATTTGAGGGCCTGACAGA
CTTCTCAGATACGTTCAAGTTGTACCGAGGCAAGTCGGATGAAAATGAAGATCCTTCTGTGGTTGGAGAGTTTAA
GGGCTCCTTTCGGATCTACCCTCTGCCGGATGACCCCAGCGTGCCAGCCCCTCCCAGACAGTTTCGGGAATTACC
TGACAGCGTCCCACAGGAATGCACGGTTAGGATTTACATTGTTCGAGGCTTAGAGCTCCAGCCCCAGGACAACAA
TGGCCTGTGTGACCCTTACATAAAAATAACACTGGGCAAAAAAGTCATTGAAGACCGAGATCACTACATTCCCAA
CACTCTCAACCCAGTCTTTGGCAGGATGTACGAACTGAGCTGCTACTTACCTCAAGAAAAAGACCTGAAAATTTC
TGTCTATGATTATGACACCTTTACCCGGGATGAAAAGTAGGAGAAACAATTATTGATCTGGAAAACCGATTCCT
TTCCCGCTTTGGGTCCCACTGCGGCATACCAGAGGAGTACTGTGTTTCTGGAGTCAATACCTGGCGAGATCAACT
GAGACCAACACAGCTGCTTCAAAATGTCGCCAGATTCAAAGGCTTCCCACAACCCATCCTTTCCGAAGATGGGAG
TAGAATCAGATATGGAGGACGAGACTACAGCTTGGATGAATTTGAAGCCAACAAAATCCTGCACCAGCACCTCGG
GGCCCCTGAAGAGCGGCTTGCTCTTCACATCCTCAGGACTCAGGGGCTGGTCCCTGAGCACGTGGAAACAAGGAC
TTTGCACAGCACCTTCCAGCCCAACATTTCCCAGGGAAAACTTCAGATGTGGGTGGATGTTTTCCCCAAGAGTTT
GGGGCCACCAGGCCCTCCTTTCAACATCACACCCCGGAAAGCCAAGAAATACTACCTGCGTGTGATCATCTGGAA
CACCAAGGACGTTATCTTGGACGAGAAAAGCATCACAGGAGAGGAAATGAGTGACATCTACGTCAAAGGCTGGAT
TCCTGGCAATGAAGAAAACAAACAGAAAACAGATGTCCATTACAGATCTTTGGATGGTGAAGGGAATTTTAACTG
GCGATTTGTTTTCCCGTTTGACTACCTTCCAGCCGAACAACTCTGTATCGTTGCGAAAAAGAGCATTTCTGGAG
TATTGACCAAACGGAATTTCGAATCCCACCCAGGCTGATCATTCAGATATGGGACAATGACAAGTTTTCTCTGGA
TGACTACTTGGGGTTTCCTAGAACTTGACTTGCGTCACACGATCATTCCTGCAAAATCACCAGAGAAATGCAGGTT
GGACATGATTCCGGACCTCAAAGCCATGAACCCCCTTAAAGCCAAGACAGCCTCCCTCTTTGAGCAGAAGTCCAT
GAAAGGATGGTGGCCATGCTACGCAGAGAAAGATGGCGCCCGCGTAATGGCTGGGAAAGTGGAGATGACATTGGA
AATCCTCAACGAGAAGGAGGCCGACGAGAGGCCAGCCGGGAAGGGGCGGGACGAACCCAACATGAACCCCAAGCT
GGACTTACCAAATCGACCAGAAACCTCCTTCCTCTGGTTCACCAACCCATGCAAGACCATGAAGTTCATCGTGTG
GCGCCGCTTTAAGTGGGTCATCATCGGCTTGCTGTTCCTGCTTATCCTGCTGCTCTTCGTGGCCGTGCTCCTCTA
CTCTTTGCCGAACTATTTGTCAATGAAGATTGTAAAGCCAAATGTGTAACAAAGGCAAAGGCTTCATTTCAAGAG
TCATCCAGCAATGAGAGAATCCTGCCTCTGTAGACCAACATCCAGTGTGATTTGTGTCTGAGACCACACCCCAG
TAGCAGGTTACGCCATGTCACCGAGCCCCATTGATTCCCAGAGGGTCTTAGTCCTGGAAAGTCAGGCCAACAAGC
AACGTTTGCATCATGTTATCTCTTAAGTATTAAAAGTTTTATTTTCTAAAGTTTAAATCATGTTTTTCAAAATAT
TTTTCAAGGTGGCTGGTTCCATTTAAAAATCATCTTTTTATATGTGTCTTCGGTTCTAGACTTCAGCTTTTGGAA
ATTGCTAAATAGAATTCAAAAATCTCTGCATCCTGAGGTGATATACTTCATATTTGTAATCAACTGAAAGAGCTG
TGCATTATAAATCAGTTAGAATAGTTAGAACAATTCTTATTTATGCCCACAACCATTGCTATATTTTGTATGGA
TGTCATAAAGTCTATTTAACCTCTGTAATGAAACTAAATAAAAATGTTTCACCTTTAAAAAAAAAAAAAAAAAAA
AAAA

FIGURE 371

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MLRVIVESASNIPKTKFGKPDPIVSVIFKDEKKKTKKVDNELNPVWNEILEFDLRGIPLDFSSSLGIIVKDFETI
GQNKLIGTATVALKDLTGDQSRSLPYKLISLLNEKGQDTGATIDLVIGYDPPSAPHPNDLSGPSVPGMGGDGEED
EGDEDRLDNAVRGPGPKGPVGTVSEAQLARRLTKVKNSRRMLSNKPQDFQIRVRVIEGRQLSGNNIRPVVKVHVC
GQTHRTRIKRGNNPFFDELFFYNVNMTPSELMDEIISIRVYNSHSLRADCLMGEFKIDVGFVYDEPGHAVMRKWL
LLNDPEDTSSGSKGYMKVSMFVLGTGDEPPPERRDRDNDSDDVESNLLLPAGIALRWVTFLLKIYRAEDIPQMDD
AFSQTVKEIFGGNADKKNLVDPFVEVSFAGKKVCTNIIEKNANPEWNQVVNLQIKFPSVCEKIKLTIYDWDRLTK
NDVVGTTYLHLSKIAASGGEVEDFSSSGTGAASYTVNTGETEVGFVPTFGPCYLNLYGSPREYTGFPDPYDELNT
GKGEGVAYRGRILVELATFLEKTPPDKKLEPISNDDLLVVEKYQRRRKYSLSAVFHSATMLQDVGEAIQFEVSIG
NYGNKFDTTCKPLASTTQYSRAVFDGNYYYYLPWAHTKPVVTLTSYWEDISHRLDAVNTLLAMAERLQTNIEALK
SGIQGKIPANQLAELWLKLIDEVIEDTRYTLPLTEGKANVTVLDTQIRKLRSRSLSQIHEAAVRMRSEATDVKST
LAEIEDWLDKLMQLTEEPQNSMPDIIIWMIRGEKRLAYARIPAHQVLYSTSGENASGKYCGKTQTIFLKYPQEKN
NGPKVPVELRVNIWLGLSAVEKKFNSFAEGTFTVFAEMYENQALMFGKWGTSGLVGRHKFSDVTGKIKLKREFFL
PPKGWEWEGEWIVDPERSLLTEADAGHTEFTDEVYQNESRYPGGDWKPAEDTYTDANGDKAASPSELTCPPGWEW
EDDAWSYDINRAVDEKGWEYGITIPPDHKPKSWVAAEKMYHTHRRRRLVRKRKKDLTQTASSTARAMEELQDQEG
WEYASLIGWKFHWKQRSSDTFRRRRWRRKMAPSETHGAAAIFKLEGALGADTTEDGDEKSLEKQKHSATTVFGAN
TPIVSCNFDRVYIYHLRCYVYQARNLLALDKDSFSDPYAHICFLHRSKTTEIIHSTLNPTWDQTIIFDEVEIYGE
PQTVLQNPPKVIMELFDNDQVGKDEFLGRSIFSPVVKLNSEMDITPKLLWHPVMNGDKACGDVLVTAELILRGKD
GSNLPILPPQRAPNLYMVPQGIRPVVQLTAIEILAWGLRNMKNFQMASITSPSLVVECGGERVESVVIKNLKKTP
NFPSSVLFMKVFLPKEELYMPPLVIKVIDHRQFGRKPVVGQCTIERLDRFRCDPYAGKEDIVPQLKASLLSAPPC
RDIVIEMEDTKPLLASKLTEKEEEIVDWWSKFYASSGEHEKCGQYIQKGYSKLKIYNCELENVAEFEGLTDFSDT
FKLYRGKSDENEDPSVVGEFKGSFRIYPLPDDPSVPAPPRQFRELPDSVPQECTVRIYIVRGLELQPQDNNGLCD
PYIKITLGKKVIEDRDHYIPNTLNPVFGRMYELSCYLPQEKDLKISVYDYDTFTRDEKVGETIIDLENRFLSRFG
SHCGIPEEYCVSGVNTWRDQLRPTQLLQNVARFKGFPQPILSEDGSRIRYGGRDYSLDEFEANKILHQHLGAPEE
RLALHILRTQGLVPEHVETRTLHSTFQPNISQGKLQMWVDVFPKSLGPPGPPFNITPRKAKKYYLRVIIWNTKDV
ILDEKSITGEEMSDIYVKGWIPGNEENKQKTDVHYRSLDGEGNFNWRFVFPFDYLPAEQLCIVAKKEHFWSIDQT
EFRIPPRLIIQIWDNDKFSLDDYLGFLELDLRHTIIPAKSPEKCRLDMIPDLKAMNPLKAKTASLFEQKSMKGWW
PCYAEKDGARVMAGKVEMTLEILNEKEADERPAGKGRDEPNMNPKLDLPN
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FIGURE 372

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GGGCTGCGCTGTCCAGCTGTGGCTATGGCCCCAGCCCCGAGATGAGGAGGGAGAGAACTAGGGGCCCGCAGGCCT
GGGAATTTCCGTCCCCCACCAAGTCCGGATGCTCACTCCAAAGTCTCAGCAGGCCCCTGAGGGAGGGAGCTGTCA
GCCAGGGAAAACCGAGAACACCATCACCATGACAACCAGTCACCAGCCTCAGGACAGATACAAAGCTGTCTGGCT
TATCTTCTTCATGCTGGGTCTGGGAACGCTGCTCCCGTGGAATTTTTTCATGACGGCCACTCAGTATTTCACAAA
CCGCCTGGACATGTCCCAGAATGTGTCCTTGGTCACTGCTGAACTGAGCAAGGACGCCCAGGCGTCAGCCGCCCC
TGCAGCACCCTTGCCTGAGCGGAACTCTCTCAGTGCCATCTTCAACAATGTCATGACCCTATGTGCCATGCTGCC
CCTGCTGTTATTCACCTACCTCAACTCCTTCCTGCATCAGAGGATCCCCCAGTCCGTACGGATCCTGGGCAGCCT
GGTGGCCATCCTGCTGGTGTTTCTGATCACTGCCATCCTGGTGAAGGTGCAGCTGGATGCTCTGCCCTTCTTTGT
CATCACCATGATCAAGATCGTGCTCATTAATTCATTTGGTGCCATCCTGCAGGGCAGCCTGTTTGGTCTGGCTGG
CCTTCTGCCTGCCAGCTACACGGCCCCCATCATGAGTGGCCAGGGCCTAGCAGGCTTCTTTGCCTCCGTGGCCAT
GATCTGCGCTATTGCCAGTGGCTCGGAACTATCAGAAAGTGCCTTCGGCTACTTTATCACAGCCTGTGCTGTTAT
CATTTTGACCATCATCTGTTACCTGGGCCTGCCCCGCCTGGAATTCTACCGCTACTACCAGCAGCTCAAGCTTGA
AGGACCCGGGGAGCAGGAGACCAAGTTGGACCTCATTAGCAAAGGAGAGGAGCCAAGAGCAGGCAAAGAGGAATC
TGGAGTTTCAGTCTCCAACTCTCAGCCCACCAATGAAAGCCACTCTATCAAAGCCATCCTGAAAAATATCTCAGT
CCTGGCTTTCTCTGTCTGCTTCATCTTCACTATCACCATTGGGATGTTTCCAGCCGTGACTGTTGAGGTCAAGTC
CAGCATCGCAGGCAGCAGCACCTGGGAACGTTACTTCATTCCTGTGTCCTGTTTCTTGACTTTCAATATCTTTGA
CTGGTTGGGCCGGAGCCTCACAGCTGTATTCATGTGGCCTGGGAAGGACAGCCGCTGGCTGCCAAGCCTGGTGCT
GGCCCGGCTGGTGTTTGTGCCACTGCTGCTGCTGTGCAACATTAAGCCCCGCCGCTACCTGACTGTGGTCTTCGA
GCACGATGCCTGGTTCATCTTCTTCATGGCTGCCTTTGCCTTCTCCAACGGCTACCTCGCCAGCCTCTGCATGTG
CTTCGGGCCCAAGAAAGTGAAGCCAGCTGAGGCAGAGACCGCAGGAGCCATCATGGCCTTCTTCCTGTGTCTGGG
TCTGGCACTGGGGGCTGTTTTCTCCTTCCTGTTCCGGGCAATTGTGTGACAAAGGATGGACAGAAGGACTGCCTG
CCTCCCTCCCTGTCTGCCTCCTGCCCCTTCCTTCTGCCAGGGGTGATCCTGAGTGGTCTGGCGGTTTTTTCTTCT
AACTGACTTCTGCTTTCCACGGCGTGTGCTGGGCCCGGATCTCCAGGCCCTGGGGAGGGAGCCTCTGGACGGACA
GTGGGGACATTGTGGGTTTGGGGCTCAGAGTCGAGGGACGGGGTGTAGCCTCGGCATTTGCTTGAGTTTCTCCAC
TCTTGGCTCTGACTGATCCCTGCTTGTGCAGGCCAGTGGAGGCTCTTGGGCTTGGAGAACACGTGTGTCTCTGTG
TATGTGTCTGTGTGTCTGCGTCCGTGTCTGTCAGACTGTCTGCCTGTCCTGGGGTGGCTAGGAGCTGGGTCTGAC
CGTTGTATGGTTTGACCTGATATACTCCATTCTCCCCTGCGCCTCCTCCTCTGTGTTTTTCCATGTCCCCCTCC
CAACTCCCCATGCCCAGTTTTTACCCATCATGCACCCTGTACAGTTGCCACGTTACTGCCTTTTTTAAAAATATA
TTTGACAGAAACCAGGTGCCTTCAGAGGCTCTCTGATTTAAATAAACCTTTCTTGTTTTTTT
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FIGURE 373

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MTTSHQPQDRYKAVWLIFFMLGLGTLLPWNFFMTATQYFTNRLDMSQNVSLVTAELSKDAQASAAPAAPLPERNS
LSAIFNNVMTLCAMLPLLLFTYLNSFLHQRIPQSVRILGSLVAILLVFLITAILVKVQLDALPFFVITMIKIVLI
NSFGAILQGSLFGLAGLLPASYTAPIMSGQGLAGFFASVAMICAIASGSELSESAFGYFITACAVIILTIICYLG
LPRLEFYRYYQQLKLEGPGEQETKLDLISKGEEPRAGKEESGVSVSNSQPTNESHSIKAILKNISVLAFSVCFIF
TITIGMFPAVTVEVKSSIAGSSTWERYFIPVSCFLTFNIFDWLGRSLTAVFMWPGKDSRWLPSLVLARLVFVPLL
LLCNIKPRRYLTVVFEHDAWFIFFMAAFAFSNGYLASLCMCFGPKKVKPAEAETAGAIMAFFLCLGLALGAVFSF
LFRAIV
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FIGURE 374

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CCTGGGCCGGCCGGGCTGGATGAGCCGGGAGCTCCCTGCTGCCGGTCATACCACAGCCTTCATCTGCGCCCTGGG
GCCAGGACTGCTGCTGTCACTGCCATCCATTGGAGCCCAGCACCCCCTCCCCGCCCATCCTTCGGACAGCAACTC
CAGCCCAGCCCCGCGTCCCTGTGTCCACTTCTCCTGACCCCTCGGCCGCCACCCCAGAAGGCTGGAGCAGGGACG
CCGTCGCTCCGGCCGCCTGCTCCCCTCGGGTCCCCGTGCGAGCCCACGCCGGCCCCGGTGCCCGCCCGCAGCCCT
GCCACTGGACACAGGATAAGGCCCAGCGCACAGGCCCCCACGTGGACAGC**ATG**GACCGCGGCACGCTCCCTCTGG
CTGTTGCCCTGCTGCTGGCCAGCTGCAGCCTCAGCCCCACAAGTCTTGCAGAAACAGTCCATTGTGACCTTCAGC
CTGTGGGCCCCGAGAGGGGCGAGGTGACATATACCACTAGCCAGGTCTCGAAGGGCTGCGTGGCTCAGGCCCCCA
ATGCCATCCTTGAAGTCCATGTCCTCTTCCTGGAGTTCCCAACGGGCCCGTCACAGCTGGAGCTGACTCTCCAGG
CATCCAAGCAAAATGGCACCTGGCCCCGAGAGGTGCTTCTGGTCCTCAGTGTAAACAGCAGTGTCTTCCTGCATC
TCCAGGCCCTGGGAATCCCACTGCACTTGGCCTACAATTCCAGCCTGGTCACCTTCCAAGAGCCCCCGGGGGTCA
ACACCACAGAGCTGCCATCCTTCCCCAAGACCCAGATCCTTGAGTGGGCAGCTGAGAGGGGCCCCATCACCTCTG
CTGCTGAGCTGAATGACCCCCAGAGCATCCTCCTCCGACTGGGCCAAGCCCAGGGGTCACTGTCCTTCTGCATGC
TGGAAGCCAGCCAGGACATGGGCCGCACGCTCGAGTGGCGGCCGCGTACTCCAGCCTTGGTCCGGGGCTGCCACT
TGGAAGGCGTGGCCGGCCACAAGGAGGCGCACATCCTGAGGGTCCTGCCGGGCCACTCGGCCGGGCCCCGGACGG
TGACGGTGAAGGTGGAACTGAGCTGCGCACCCGGGGATCTCGATGCCGTCCTCATCCTGCAGGGTCCCCCCTACG
TGTCCTGGCTCATCGACGCCAACCACAACATGCAGATCTGGACCACTGGAGAATACTCCTTCAAGATCTTTCCAG
AGAAAAACATTCGTGGCTTCAAGCTCCCAGACACACCTCAAGGCCTCCTGGGGGAGGCCCGGATGCTCAATGCCA
GCATTGTGGCATCCTTCGTGGAGCTACCGCTGGCCAGCATTGTCTCACTTCATGCCTCCAGCTGCGGTGGTAGGC
TGCAGACCTCACCCGCACCGATCCAGACCACTCCTCCCAAGGACACTTGTAGCCCGGAGCTGCTCATGTCCTTGA
TCCAGACAAAGTGTGCCGACGACGCCATGACCCTGGTACTAAAGAAAGAGCTTGTTGCGCATTTGAAGTGCACCA
TCACGGGCCTGACCTTCTGGGACCCCAGCTGTGAGGCAGAGGACAGGGGTGACAAGTTTGTCTTGCGCAGTGCTT
ACTCCAGCTGTGGCATGCAGGTGTCAGCAAGTATGATCAGCAATGAGGCGGTGGTCAATATCCTGTCGAGCTCAT
CACCACAGCGGAAAAAGGTGCACTGCCTCAACATGGACAGCCTCTCTTTCCAGCTGGGCCTCTACCTCAGCCCAC
ACTTCCTCCAGGCCTCCAACACCATCGAGCCGGGGCAGCAGAGCTTTGTGCAGGTCAGAGTGTCCCCATCCGTCT
CCGAGTTCCTGCTCCAGTTAGACAGCTGCCACCTGGACTTGGGGCCTGAGGGAGGCACCGTGGAACTCATCCAGG
GCCGGGCGGCCAAGGGCAACTGTGTGAGCCTGCTGTCCCCAAGCCCCGAGGGTGACCCGCGCTTCAGCTTCCTCC
TCCACTTCTACACAGTACCCATACCCAAAACCGGCACCCTCAGCTGCACGGTAGCCCTGCGTCCCAAGACCGGGT
CTCAAGACCAGGAAGTCCATAGGACTGTCTTCATGCGCTTGAACATCATCAGCCCTGACCTGTCTGGTTGCACAA
GCAAAGGCCTCGTCCTGCCCGCCGTGCTGGGCATCACCTTTGGTGCCTTCCTCATCGGGGCCCTGCTCACTGCTG
CACTCTGGTACATCTACTCGCACACGCGTGAGTACCCCAGGCCCCCACAG**TGA**GCATGCCGGGCCCCTCCATCCA
CCCGGGGGGAGCCCAGTGAAGCCTCTGAGGGATTGAGGGGCCCTGGCAGGACCCTGACCTCCGCCCCTGCCCCCGC
TCCCGCTCCCAGGTTCCCCCAGCAAGCGGGAGCCCGTGGTGGCGGTGGCTGCCCCGGCCTCCTCGGAGAGCAGCA
GCACCAACCACAGCATCGGGAGCACCCAGAGCACCCCCTGCTCCACCAGCAGCATGGCATAGCCCCGGCCCCCCG
CGCTCGCCCAGCAGGAGAGACTGAGCAGCCGCCAGCTGGGAGCACTGGTGTGAACTCACCCTGGGAGCCAGTCCT
CCACTCGACCCAGAATGGAGCCTGCTCTCCGCGCCTACCTTCCCGCCTCCCTCTCAGAGGCCTGCTGCCAGTGC
AGCCACTGGCTTGGAACACCTTGGGGTCCCTCCACCCCACAGAACCTTCAACCCAGTGGGTCTGGGATATGGCTG
CCCAGGAGACAGACCACTTGCCACGCTGTTGTAAAAACCCAAGTCCCTGTCATTTGAACCTGGATCCAGCACTGG
TGAACTGAGCTGGGCAGGAAGGGAGAACTTGAAACAGATTCAGGCCAGCCCAGCCAGGCCAACAGCACCTCCCCG
CTGGGAAGAGAAGAGGGCCCAGCCCAGAGCCACCTGGATCTATCCCTGCGGCCTCCACACCTGAACTTGCCTAAC
TAACTGGCAGGGGAGACAGGAGCCTAGCGGAGCCCAGCCTGGGAGCCCAGAGGGTGGCAAGAACAGTGGGCGTTG
GGAGCCTAGCTCCTGCCACATGGAGCCCCCTCTGCCGGTCGGGCAGCCAGCAGAGGGGGAGTAGCCAAGCTGCTT
GTCCTGGGCCTGCCCCTGTGTATTCACCACCAATAAATCAGACCATGAAACCTGAAAAAAAAAAAA
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FIGURE 375

MDRGTLPLAVALLLASCSLSPTSLAETVHCDLQPVGPERGEVTYTTSQVSKGCVAQAPNAILEVHVLFLEFPTGP
SQLELTLQASKQNGTWPREVLLVLSVNSSVFLHLQALGIPLHLAYNSSLVTFQEPPGVNTTELPSFPKTQILEWA
AERGPITSAAELNDPQSILLRLGQAQGSLSFCMLEASQDMGRTLEWRPRTPALVRGCHLEGVAGHKEAHILRVLP
GHSAGPRTVTVKVELSCAPGDLDAVLILQGPPYVSWLIDANHNMQIWTTGEYSFKIFPEKNIRGFKLPDTPQGLL
GEARMLNASIVASFVELPLASIVSLHASSCGGRLQTSPAPIQTTPPKDTCSPELLMSLIQTKCADDAMTLVLKKE
LVAHLKCTITGLTFWDPSCEAEDRGDKFVLRSAYSSCGMQVSASMISNEAVVNILSSSSPQRKKVHCLNMDSLSF
QLGLYLSPHFLQASNTIEPGQQSFVQVRVSPSVSEFLLQLDSCHLDLGPEGGTVELIQGRAAKGNCVSLLSPSPE
GDPRFSFLLHFYTVPIPKTGTLSCTVALRPKTGSQDQEVHRTVFMRLNIISPDLSGCTSKGLVLPAVLGITFGAF
LIGALLTAALWYIYSHTREYPRPPQ

FIGURE 376

TCGGAGGAGCCAGCCGAAATCCTGCCGCCTGCCCGGGACGAGGAGGAGGAGGAGGAAGAGGGG**ATG**GAGCAGGGG
CTGGAGGAGGAAGAAGAGGTGGATCCCCGGATCCAGGGAGAACTGGAGAAGTTAAATCAGTCCACGGATGATATC
AACAGACGGGAGACTGAACTTGAGGATGCTCGTCAGAAGTTCCGCTCTGTTCTGGTTGAAGCAACGGTGAAACTG
GATGAACTGGTGAAGAAAATTGGCAAAGCTGTGGAAGACTCCAAGCCCTACTGGGAGGCACGGAGGGTGGCGAGG
CAGGCTCAGCTGGAAGCTCAGAAAGCCACGCAGGACTTCCAGAGGGCCACAGAGGTGCTCCGTGCCGCCAAGGAG
ACCATCTCCCTGGCCGAGCAGCGGCTGCTGGAGGATGACAAGCGGCAGTTCGACTCCGCCTGGCAGGAGATGCTG
AATCACGCCACTCAGAGGGTCATGGAGGCGGAGCAGACCAAGACCAGGAGCGAGCTGGTGCATAAGGAGACGGCA
GCCAGGTACAATGCCGCCATGGGCCGCATGCGACAGCTGGAGAAGAAACTCAAGAGAGCCATCAACAAGTCCAAG
CCTTATTTTGAACTCAAGGCAAAGTACTATGTGCAGCTCGAGCAACTGAAAAAGACTGTGGATGACCTGCAGGCC
AAACTGACCCTGGCAAAAGGCGAGTACAAGATGGCCCTGAAGAACCTGGAGATGATCTCAGATGAGATCCACGAG
CGGCGGCGCTCCAGTGCCATGGGGCCTCGGGGATGCGGTGTTGGTGCTGAGGGCAGCAGCACATCTGTGGAGGAT
CTGCCAGGGAGCAAACCTGAGCCTGATGCCATTTCTGTGGCCTCGGAGGCCTTTGAAGATGACAGCTGTAGCAAC
TTTGTGTCTGAAGATGACTCGGAAACCCAGTCCGTGTCCAGCTTTAGTTCAGGACCAACAAGCCCGTCTGAGATG
CCTGACCAGTTCCCTGCGGTTGTGAGGCCTGGCAGCCTGGATCTGCCCAGCCCTGTGTCCCTGTCAGAGTTTGGG
ATGATGTTCCCAGTGTTGGGCCCTCGAAGTGAATGCAGCGGGGCCTCCTCCCCTGAATGTGAAGTAGAACGAGGA
GACAGGGCAGAAGGGGCAGAGAATAAAACAAGTGACAAAGCCAACAACAACCGGGGCCTCAGCAGTAGCAGTGGC
AGTGGTGGCAGCAGTAAGAGCCAAAGCAGCACCTCCCCTGAGGGCCAGGCCTTGGAGAACCGGATGAAGCAGCTC
TCCCTACAGTGCTCAAAGGGAAGAGATGGAATTATTGCTGACATAAAAATGGTGCAGATTGGC**TGA**TTCATCCTG
GGCCCTGGCCGATGTGCATATCAACATTTATACATGGAACTGGAGAACATTGTGCCAATAATCATTTAATATATG
CCAAATCTTACACGTCTACTCTAAACTGCTCTAATGAAGTTTCAGTGACCTTGAGGGCTAAAGATTGTTCTTCTG
GGTAAGAGCTCTTGGGCTGGTTTTTCAGAGCAGAGTTCTTGTTGTGGGTAGACTGTGACTAGGTTCACAGCCTTT
GTGGAACATTCCGTATAACGGCATTGTGGAAGCAATAACTAGTTCCTATGAAAGAACCAGAGCTGGGAAGATGGC
TGGGAAGCCAGGCCAAAGTGGGGGCAACAGCTTGCTTCTCTTTCTCTTCTCACCCTCAGTTTGTATGGGAAAATG
GAGATGTCCTCTCCACTTTATCCCACGATATCTAAATGAAAAGAAAGAAAACCCACACACAAAGCAAAAACTCA
AGTATTAAGAGCACATATTTTTGACCCAGTGGAGGCTTAAAAAAAAAAAAAAATCCAAGAACACAATTCATTTTCAC
CACCTCTGGTGTTCAGAGGGGGCTTTTAAAAAAGCGTGTATGCTGGGATACCCATTAAAACCATTTTCTAGAAGG
CTACCATGAGCTGCACTTTTTGGGGTGGGAAAGGTGAATGCCAGTGGGGATGCGGGGGGATGAGGGTAGGAGGGA
CTTATAGAAGGGGATTTGTGGCTGTGGGGGAGAAGGTTCTACAGCATAAGCCTTATCCTGCCAGCCAAGGGGATT
TATTCTAAGAGAAGTGCATGTGAAGAATGGTTGCCACTGTTATTAGATTGACAAGATGTTAATTTCTCTGTAGGT
TGTAACTTTAAAAATAAATGAAATTATTTAAGGGTTATGCTGCACTAGTATTCCTTAGAGGAAACAGTTCTTTAA
AGTTAGGAAAGGGAGTAGGCAGGCATGTGTTGGCAAAGGCTGTTAATAGTAGTTAAGTGTTAAGACTGCTTTTCT
TTAACGTTTTCATGGTAATGCATATTTAGAGCACTGTATTTTTGTCTTGTTAAGAAAATTTAGCATTTCTAAAAG
AAAAAAGCAACCCTCTTTCAAACTGTTAATTCTGTCACAGCCTGTATATTTTAGTCATTTGTAAATCTCTTCATA
CAATAGTGACTTCTTTTTTGACTGATACAGTATCTTAATTACAAGGTTATTTTGTACTTGTCTTAATACACTAAG
TGTAATAAAAACGGCTTGAG

FIGURE 377

MEQGLEEEEEVDPRIQGELEKLNQSTDDINRRETELEDARQKFRSVLVEATVKLDELVKKIGKAVEDSKPYWEAR
RVARQAQLEAQKATQDFQRATEVLRAAKETISLAEQRLLEDDKRQFDSAWQEMLNHATQRVMEAEQTKTRSELVH
KETAARYNAAMGRMRQLEKKLKRAINKSKPYFELKAKYYVQLEQLKKTVDDLQAKLTLAKGEYKMALKNLEMISD
EIHERRRSSAMGPRGCGVGAEGSSTSVEDLPGSKPEPDAISVASEAFEDDSCSNFVSEDDSETQSVSSFSSGPTS
PSEMPDQFPAVVRPGSLDLPSPVSLSEFGMMFPVLGPRSECSGASSPECEVERGDRAEGAENKTSDKANNNRGLS
SSSGSGGSSKSQSSTSPEGQALENRMKQLSLQCSKGRDGIIADIKMVQIG

FIGURE 378

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GACGCCATCCCTGTGACCATGACGATGTCCTCCATCGTGATGAAGGCAGAGAGCAGAGACATCCCGATCTGGGGA
ACTCTGATCCAGTATATACGGCCTGTGTTCGTGTCCCGGTCAGACCAGGATTCTCGCAGGAAAACAGTAGAAGAA
ATCAAGAGACGGGCGCAGTCCAACGGAAAGTGGCCACAGATAATGATTTTTCCAGAAGGAACTTGTACAAACAGG
ACCTGCCTAATTACCTTCAAACCTGGTGCATTCATCCCTGGAGCGCCCGTCCAGCCTGTGGTTTTACGATATCCA
AATAAACTGGACACCATCACATGGACGTGGCAAGGACCTGGAGCGCTGGAAATCCTGTGGCTCACGCTGTGTCAG
TTTCACAACCAAGTGGAAATCGAGTTCCTTCCTGTGTACAGCCCTTCTGAGGAGGAGAAGAGGAACCCCGCGCTG
TATGCCAGCAACGTGCGGCGAGTC**ATG**GCCGAGGCCTTGGGTGTCTCCGTGACTGACTACACGTTCGAGGACTGC
CAGCTGGCCCTGGCGGAAGGACAGCTCCGTCTCCCCGCTGACACTTGCCTTTTAGAATTTGCCAGGCTCGTGCGG
GGCCTCGGGCTAAAACCAGAAAAGCTTGAAAAAGATCTGGACAGATACTCAGAAAGAGCCAGGATGAAGGGAGGA
GAGAAGATAGGTATTGCGGAGTTTGCCGCCTCCCTGGAAGTCCCCGTTTCTGACTTGCTGGAAGACATGTTTTCA
CTGTTCGACGAGAGCGGCAGCGGCGAGGTGGACCTGCGAGAGTGTGTGGTTGCCCTGTCTGTCGTCTGCCGGCCG
GCCCGGACCCTGGACACCATCCAGCTGGCTTTCAAGATGTACGGAGCGCAAGAGGACGGCAGCGTCGGCGAAGGT
GACCTGTCCTGCATCCTCAAGACGGCCCTGGGGGTGGCAGAGCTCACCGTGACCGACCTATTCCGAGCCATTGAC
CAAGAGGAGAAGGGGAAGATCACATTCGCTGACTTCCACAGGTTTGCAGAAATGTACCCTGCCTTCGCAGAGGAA
TACCTGTACCCGGATCAGACACATTTCGAAAGCTGTGCAGAGACCTCACCTGCGCCAATCCCAAACGGCTTCTGT
GCCGATTTCAGCCCGGAAAACTCAGACGCTGGGCGGAAGCCTGTTCGCAAGAAGCTGGAT**TAG**GACCCAGGGGTTG
CGGAGAGACGCGGCCCCTCCCGCGTGGACATCACCGCCATGAGCCTCTTTGCGAGTGACCTCTGGGCTCCGCTCC
TCACTCCTGCTGTACAGGCACTGTCTTCAGCCCGAGTTCCAGGGGCCTCGGGGGCTGTTTGTATCTTGTTCCTTT
GTGAAGTGTGTTGCAGAACCGACGCTTACTGTGCGAGAATCGGAGGGCGCGCACGCGGATCCCCCGCCTGGCCTG
GACCCCGTGGGGTCAGGTTCCCTGCCGGGCGGGGGGCACCGGTGCCGCCCCGTGTTCTCCCACGGGGCCCTGGTT
TCGAGTCTCTGTCACAGCCTCTTCCGGCGGCAGCGTGCACCGGGCGGGCCTCCGTGCACACTCAGCACACGCCTG
CCACACAGCGTGCGCTTGCGTGTCACTCTGGCACGAAACCTGTCTGCCTCTGTGGATCCACAGCCTGGCAGAGCC
GAGCCGTCACCTGATTTTTCAGTGTTTCTACCTGTGTGCTGGAGCTCATGAGTATTTTATAAACTCCATTTAGGT
ACTTCAGGAAACATGCAGCATTTTTTAAAAAATGAAAATTGTTTTTCTACTTCATTTTTCCTTTTAGAGTCAAAG
GATATTTATTTATAGGCCTTTTTTTTTTTAATATAGAATCTGAGGCTGTTTGGGCTTTGACTTAAATTTCCATCA
GGCCTCTCTCCAGCAGGTAATCCCTCTCCTTCCGCTGGGTCCCCTGGGGAGGTGTGAACTCAAGGGCCTAGCCCC
AAAACACTTTTTCTGCTTTTCTTAATCCTTTTCCAGTCCCCTCTTTTTTTATAAACGTTGGCAGTTTGATGTTTC
TGTTTCGGCATAACGTAATCCATTTCACTGTAGCCTAAACTCCAGTCCGAGGTTGGATATTGTTCAAATGAGCAG
GGCCCGAGCTGGAAGCGCAAGGCAGCCGCCGCCGTGCCGCTCCTCCCTTGCCCTCAGGCCAGGTCCCTGCTGGAA
GCGGCTGCATCTTCCTGTCAGCCCTGGTTTCCATGGTGACTGGCGTCACGCAGCCACCCGAGTATGGCTGACCTT
CCTGCAGAGAGAGGAGCCGCAGTCTTTTGCTTGTGGAAGGAGACGCTGGGCTGTGCGGTGCGGAGGGTGATGAGG
ATGTCTGGTGACAGCCGTGCGGACACCACTCCTCTCTGCAGCACTGCCTCCCAGCGCCAGGGTCGCGGGCACATC
CCACTGAGAGCGGGGGTCCTGCCCCATCTTAGAGTCAAAGGCAGAGGGGCTTCCAGGCCCTGGATGGGGTATTTT
GGTGTCACCTGAAGTCCCTCTGACATCACCTTGTTTCATCATTTTTATGACAGAATTAGAAACCCATCCTTCAA
GCACAATAATCATCACAGACTTGAGTTTGCTTCCTAAAGCAAAGGCTCCGGGTTTGTTTGGAAAATTTTTTTGAT
TTCTGAAATGAATTGATTTTTATATTTGGGGCATCTCTATAGAAAGTGACCACCAAGGCCAGTAAGTACGGGAAA
AAATGTTACTAACTTCCTCAGAGATTCGTGATACGCGTTCTCCACTGACAGACATTTAAAAACAACCTTCAGC
TCCGTTTCAATCAATCACCTCGACTTGTTTTTTAGCATGGACACTGCCAGCAGGACAGACAGGGATGGAGTAAAC
CGAAGTCAATTTCAGGGCTCTTGGCTGTTGGACACAGAAGAAATCCTAGTGCAGCCTTTGGTAGCTAACAGTCAC
TGATTTTATAATTGGAGAATGCGTAAAGATTCATTTTTCAAGGAGAAGAGCCTGCAAATGGCCAATGAAGGAGGT
AAATAAACTAAGATATTCCGAGGGAAGGGACCCAGGCCACCTCCCTTCCGCAGGTCTGCAGATGAAGGGTTTTTT
GAATGAAATGCCACTGTGCATTTTCAGAAAAAAAATCTCTGATAAACAGACTTTGAATGGATGTTTGTTCCTCC
TGATTCTCTTTTCTCTTCGTGGCGACTTAGAGTTGGCGGATATTCGGAACTGTGAATGTACATAGCGTTGAGTTA
AACCCCTTGTGTGTGAGACAGGACGCAGCGGGCCCCTGGTGGCCTGGGGGCCAGACCCGTGGGCAGGTGGGGCAT
GGGCCCTGGCCTGCGGGGACCTGCTGGGGTGTGAGGGCAGAGGGAGGGTTGCCATGAAGGAACTTGGGATTTTCA
ATGGAATAAGTAAAACATAAAGTCTATACTTGGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAA
```

FIGURE 379

MAEALGVSVTDYTFEDCQLALAEGQLRLPADTCLLEFARLVRGLGLKPEKLEKDLDRYSERARMKGGEKIGIAEF
AASLEVPVSDLLEDMFSLFDESGSGEVDLRECVVALSVVCRPARTLDTIQLAFKMYGAQEDGSVGEGDLSCILKT
ALGVAELTVTDLFRAIDQEEKGKITFADFHRFAEMYPAFAEEYLYPDQTHFESCAETSPAPIPNGFCADFSPENS
DAGRKPVRKKLD

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FIGURE 380

GGCACGAGGCCGGATCCACCGTGCCTCTGCGGCCTGCGTGCCCGGAGTCCCCGCCTGTGTCGTCTCTGTCGCCGT
CCCCGTCTCCTGCCAGGCGCGGAGCCCTGCGAGCCGCGGGTGGGCCCCAGGCGCGCAGAC**ATG**GGCTGCTCCGCC
AAAGCGCGCTGGGCTGCCGGGGCGCTGGGCGTCGCGGGGCTACTGTGCGCTGTGCTGGGCGCTGTCATGATCGTG
ATGGTGCCGTCGCTCATCAAGCAGCAGGTCCTTAAGAACGTGCGCATCGACCCCAGTAGCCTGTCCTTCAACATG
TGGAAGGAGATCCCTATCCCCTTCTATCTCTCCGTCTACTTCTTTGACGTCATGAACCCCAGCGAGATCCTGAAG
GGCGAGAAGCCGCAGGTGCGGGAGCGCGGGCCCTACGTGTACAGGGAGTTCAGGCACAAAAGCAACATCACCTTC
AACAACAACGACACCGTGTCCTTCCTCGAGTACCGCACCTTCCAGTTCCAGCCCTCCAAGTCCCACGGCTCGGAG
AGCGACTACATCGTCATGCCCAACATCCTGGTCTTGGGTGCGGCGGTGATGATGGAGAATAAGCCCATGACCCTG
AAGCTCATCATGACCTTGGCATTCACCACCCTCGGCGAACGTGCCTTCATGAACCGCACTGTGGGTGAGATCATG
TGGGGCTACAAGGACCCCCTTGTGAATCTCATCAACAAGTACTTTCCAGGCATGTTCCCCTTCAAGGACAAGTTC
GGATTATTTGCTGAGCTCAACAACTCCGACTCTGGGCTCTTCACGGTGTTCACGGGGGTCCAGAACATCAGCAGG
ATCCACCTCGTGGACAAGTGGAACGGGCTGAGCAAGGTTGACTTCTGGCATTCCGATCAGTGCAACATGATCAAT
GGAACTTCTGGGCAAATGTGGCCGCCCTTCATGACTCCTGAGTCCTCGCTGGAGTTCTACAGCCCGGAGGCCTGC
CGATCCATGAAGCTAATGTACAAGGAGTCAGGGGTGTTTGAAGGCATCCCCACCTATCGCTTCGTGGCTCCCAAA
ACCCTGTTTGCCAACGGGTCCATCTACCCACCCAACGAAGGCTTCTGCCCGTGCCTGGAGTCTGGAATTCAGAAC
GTCAGCACCTGCAGGTTCAGTGCCCCCTTGTTTCTCTCCCATCCTCACTTCCTCAACGCCGACCCGGTTCTGGCA
GAAGCGGTGACTGGCCTGCACCCTAACCAGGAGGCACACTCCTTGTTCCTGGACATCCACCCGGTCACGGGAATC
CCCATGAACTGCTCTGTGAAACTGCAGCTGAGCCTCTACATGAAATCTGTCGCAGGCATTGGACAAACTGGGAAG
ATTGAGCCTGTGGTCCTGCCGCTGCTCTGGTTTGCAGAGAGCGGGGCCATGGAGGGGGAGACTCTTCACACATTC
TACACTCAGCTGGTGTTGATGCCCAAGGTGATGCACTATGCCCAGTACGTCCTCCTGGCGCTGGGCTGCGTCCTG
CTGCTGGTCCCTGTCATCTGCCAAATCCGGAGCCAAGTAGGTGCTGGCCAGAGGGCAGCCCGGGCTGACAGCCAT
TCGCTTGCCTGCTGGGGGAAAGGGGCCTCAGATCGGACCCTCTGGCCAACCGCAGCCTGGAGCCCACCTCCAGCA
GCAGTCCTGCGTCTCTGCCGGAGTGGGAGCGGTCACTGCTGGGGGCTGCGCAGCACGCTTGCGTCTTTTGCATGC
CGCGTTGCCACTACTCTGCCTGTTCTGGAAGGCCTGGGACCCTCCCTTGGAGGGGGCACAGGGTCC**TGA**GGACAC
CGTGAGCCAGCCAGGCCTGGCCGCTGGGCCTGACCGGCCCCCCAGCCCCTACACCCCGCTTCTCCCGGACTCTCC
CAGCGGACAGCCCCCCAGCCCCACAGCCTGAGCCTCCCAGCTGCCATGTGCCTGTTGCACACCTGCACACACGCC
CTGGCACACATACACACATGCGTGCAGGCTTGTGCAGACACTCAGGGATGGAGCTGCTGCTGAAGGGACTTGTAG
GGAGAGGCTCGTCAACAAGCACTGTTCTGGAACCTTCTCTCCACGTGGCCCACAGGCCTGACCACAGGGGCTGTG
GGTCCTGCGTCCCCTTCCTCGGGTGAGCCTGGCCTGTCCCGTTCAGCCGTTGGGCCCAGGCTTCCTCCCCTCCAA
GGTGAAACACTGCAGTCCCGGTGTGGTGGCTCCCCATGCAGGACGGGCCAGGCTGGGAGTGCCGCCTTCCTGTGC
CAAATTCAGTGGGGACTCAGTGCCCAGGCCCTGGCCACGAGCTTTGGCCTTGGTCTACCTGCCAGGCCAGGCAAA
GCGCCTTTACACAGGCCTCGGAAAACAATGGAGTGAGCACAAGATGCCCTGTGCAGCTGCCCGAGGGTCTCCGCC
CACCCCGGCCGGACTTTGATCCCCCCGAAGTCTTCACAGGCACTGCATCGGGTTGTCTGGCGCCCTTTTCCTCCA
GCCTAAACTGACATCATCCTATGGACTGAGCCGGCCACTCTCTGGCCGAAGTGGCCGCAGGCTGTGCCCCCGAGC
TGCCCCCACCCCCTCACAGGGTCCCTCAGATTATAGGTGCCCAGGCTGAGGTGAAGAGGCCTGGGGGCCCTGCCT
TCCGGGCGCTCCTGGACCCTGGGGCAAACCTGTGACCCTTTTCTACTGGAATAGAAATGAGTTTTATCATCTTTG
AAAAATAATTCACTCTTGAAGTAATAAACGTTTAAAAAAAAAAAAAAAAAA

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FIGURE 381

MGCSAKARWAAGALGVAGLLCAVLGAVMIVMVPSLIKQQVLKNVRIDPSSLSFNMWKEIPIPFYLSVYFFDVMNP
SEILKGEKPQVRERGPYVYREFRHKSNITFNNNDTVSFLEYRTFQFQPSKSHGSESDYIVMPNILVLGAAVMMEN
KPMTLKLIMTLAFTTLGERAFMNRTVGEIMWGYKDPLVNLINKYFPGMFPFKDKFGLFAELNNSDSGLFTVFTGV
QNISRIHLVDKWNGLSKVDFWHSDQCNMINGTSGQMWPPFMTPESSLEFYSPEACRSMKLMYKESGVFEGIPTYR
FVAPKTLFANGSIYPPNEGFCPCLESGIQNVSTCRFSAPLFLSHPHFLNADPVLAEAVTGLHPNQEAHSLFLDIH
PVTGIPMNCSVKLQLSLYMKSVAGIGQTGKIEPVVLPLLWFAESGAMEGETLHTFYTQLVLMPKVMHYAQYVLLA
LGCVLLLVPVICQIRSQVGAGQRAARADSHSLACWGKGASDRTLWPTAAWSPPPAAVLRLCRSGSGHCWGLRSTL
ASFACRVATTLPVLEGLGPSLGGGTGS

FIGURE 382

AGTCAAG**ATG**GAGGAGTACGCGCGAGAGCCTTGCCCATGGCGAATTGTGGATGACTGTGGTGGGGCCTTTACGAT
GGGTACCATTGGTGGTGGTATCTTTCAAGCAATCAAAGGTTTTCGCAATTCTCCAGTGGGAGTAAACCACAGACT
ACGAGGGAGTTTGACAGCTATTAAAACCAGGGCTCCACAGTTAGGAGGTAGCTTTGCAGTTTGGGGAGGGCTGTT
TTCCATGATTGACTGTAGTATGGTTCAAGTCAGAGGAAAGGAAGATCCCTGGAACTCCATCACAAGTGGTGCCTT
AACGGGAGCCATACTGGCAGCAAGAAATGGACCAGTGGCCATGGTTGGGTCAGCCGCAATGGGTGGCATTCTCCT
AGCTTTAATTGAAGGAGCTGGTATCTTGTTGACAAGATTTGCCTCTGCACAGTTTCCCAATGGTCCTCAGTTTGC
AGAAGACCCCTCCCAGTTGCCTTCAACTCAGTTACCTTCCTCACCTTTTGGAGACTATCGACAATATCAG**TAG**GA
CTTCTTTCCTAGGATTTCTTTAACAGAACGAGTTGTGGTTCGAGAAGGATTTCAGAAGATCAAGTTACAGTCTGT
TTTTAAAACCATAGGTGGGACAGCTATGGCCAATAGGCTATAAAGAGACATTTAGCACTTTTTTCTATTTAAAGG
AACAAGCGGGGAAGGGTGCTAAAAGATAATACGTTTATTTATTCACACTTGAATTGCATTTGTGATCAAAATAAA
TGTTTAAATCGCTAAAGGAAAATACAGTAAGTGCTTGAAAGATGAAGGACCAAAAGGCCAAAAAACAGTGAAATA
TGATCATCATCTCTTGCGGACTTCTCTGCCTGGTTTTGTGTGTTCTGTTATTCAAACAATAAAAAGCTGGTGGAA
CTTACTCTTTCTTTTAAGATAAGTTGTAGACTTCGATGTTTCATGCTCATGTACTTCAAATAATGCATGTTTTAT
AGTTAGTCCCTCATCACTTGAAGTGACTTCTGAGAATTATGCAGAGTCAACATGGATCATTTCACAGTGAGATGC
TTTATGGATTGAAGGATATGGTAAAATGTTTATAGTTTACTTTGAAAGTAAAATATACTATGTCTTGGTTTTGAG
GATATTGGATACAAAACTCTCTTCCTTTAGGGCTACTGAGTCTTGATTCCTGATCATCAGAAATTTCACCAGAAA
CAACTTGCTTCCAATATACCCAATTCTATATGAAGAATTCATGGAGAGTGTACTGGCACTGGAAGAGTTTAGTGT
TTCTTGTATGCTTGAAAATAAAGTATGTACTGTTTTGAATGTGTTCCAAGTCCTCTGCATAAACGATGTATTTTG
GGGTCTGGTTGGGCCTGGAAAATGGATGAGCACTTCAGAACAGGTCATTTTCCTGATATTGGAAGTGACATGTGG
CCCTATAGGAGGCATGATGTTAGTTAATTACACATTTGCCTACATCTGTGGGAAATGGAGAACAAAGCCATGTGG
GTACTGTAAACACACGTTTATCTTTTGGCCCAATGCCATACATATGGTAGGCATTTAATTACTGATTGTGTTTGG
ATAATTTGGGAATTTTCGACTGTGGTAAAATATACATAAATAATACTTATTAAAAAAAAAAAAAAAAA

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FIGURE 383

MEEYAREPCPWRIVDDCGGAFTMGTIGGGIFQAIKGFRNSPVGVNHRLRGSLTAIKTRAPQLGGSFAVWGGLFSM
IDCSMVQVRGKEDPWNSITSGALTGAILAARNGPVAMVGSAAMGGILLALIEGAGILLTRFASAQFPNGPQFAED
PSQLPSTQLPSSPFGDYRQYQ

FIGURE 384

ATGGCGACGGAGCAGAGGCCTTTCCACCTGGTGGTGTTCGGCGCGTCTGGCTTCACCGGCCAGTTCGTGACCGAG
GAGGTGGCCCGGGAGCAGGTGGACCCGGAGCGGACCCAGCCTGCCCTGGGCGTGGCGGGCCGCTCCCGGGAGAAG
CTGCAGCGGGTGCTGGAGAAGGCGGCCCTGAAGCTGGGAAGACCAACACTGTCATCTGAAGTTGGAATCATCATC
TGTGATATTGCTAATCCAGCCTCGCTTGATGAAATGGCTAAACAGGCAACAGTTGTCCTCAATTGCGTAGGACCA
TATCGGTTTTATGGAGAACCTGTAATAAAAGCATGTATTGAAAATGGAGCCAGTTGTATCGACATCAGTGGAGAA
CCTCAGTTTCTGGAACTAATGCAACTGAAGTATCATGAGAAAGCTGCAGACAAAGGGGTTTATATCATTGGAAGC
AGCGGCTTTGACTCCATTCCAGCAGATCTGGGAGTAATATATACCAGAAATAAAATGAATGGTACTTTGACTGCT
GTGGAAAGTTTCCTGACTATACATTCAGGACCTGAGGGGTTGAGCATTCATGATGGTACCTGGAAGTCAGCAATT
TATGGTTTTGGAGATCAGAGTAATTTGAGAAAACTAAGAAATGTATCAAATCTGAAACCTGTCCCGCTCATTGGT
CCAAAATTGAAGAGAAGGTGGCCAATTTCTTATTGTCGGGAACTCAAAGGTTATTCCATTCCTTTATGGGATCT
GATGTGTCTGTTGTAAGGAGGACTCAACGTTACTTGTATGAAAATTTAGAGGAATCACCAGTTCAGTATGCTGCG
TATGTAACTGTGGGAGGCATCACCTCTGTTATTAAGCTGATGTTTGCAGGACTTTTCTTTTTGTTCTTTGTGAGG
TTTGGAATTGGAAGGCAACTTCTCATAAAATTCCCATGGTTCTTCTCCTTTGGCTATTTTTCAAAACAAGGCCCA
ACACAAAAACAGATTGATGCTGCCTCATTCACGCTGACATTCTTTGGTCAAGGATACAGCCAAGGCACTGGTACA
GATAAGAACAAACCAAATATCAAAATTTGTACTCAGGTGAAAGGACCAGAGGCTGGCTATGTGGCTACCCCCATA
GCTATGGTTCAGGCAGCCATGACTCTTCTAAGTGATGCTTCTCATCTGCCTAAGGCGGGCGGGGTCTTCACACCT
GGAGCAGCTTTTTCCAAAACAAAGTTGATTGACAGACTCAACAAACACGGTATTGAGTTTAGTGTTATTAGCAGC
TCTGAAGTC**TAA**ACACTGGAAGAATTAACTGAAGTCATAACGTGCGTGAATTAACAGCTTCTCTATTTGATATTT
GAAATTCTTCTGTAAGCCTGTCTGAGTGTATGTGGAAACGATTGTCAAATCTAAAATATCTATATATTAAAAAGT
AGGAAATTGTCCTAGCTTACCCTAAATTTCAAATCTGAGTTGATTTTGTGATTTTATTGCTTATAACAGAGAACT
CATATTTGACATATTTTTTTCATTGATGTGTTCCTGGTAGATTTTCACGAATGAGCTGGCAGGTCTAATGGGGGA
GGCGGCGTCCCAGTCTGTGTTGCAGCAGCATTCTCATCGGGGGTGCGCACACCATCGTTACTGTCGGGCAGTAAC
TGCCGCTTGCCTTGCCGCAGTAGGAGGGAAATCTCACCTTCCTTCCACATACTGTCTTGAGCCTTTGCTAAATTA
AACTGCACTTTTTGCTGTTTTTGCCTAGTTTTTCGCCAATCTACACTGATTTTGGACTGTTACCTAAGTTGAAAA
ATAAAAGGTTGTCAATCGAATGGTGGTTAATGTTGGACCTGCCGATGTATTTGTATAGTGGTAGAAACATGCTGC
TTAAGTGGCCTAACCTGTTTCTTGCCAATAAGTAGGCTTATCATTTTATTTTTACGTAATTCTATATCTGTGACT
AGGTTTTTAAGGATACAGCTTATAAGTTGCTATCAATTTTCACTACCTAAGCAGAATTTTTCTCTAATTTACTTT
TTGTATTTTAACTAGGTTTTACATGGAAGCCCTAAAATAAGGCAAAGACTTTTTCTTTTGTAATAAGCATATAA
TAAACACGTATATACATAGCAAATTGA

FIGURE 385

MATEQRPFHLVVFGASGFTGQFVTEEVAREQVDPERTQPALGVAGRSREKLQRVLEKAALKLGRPTLSSEVGIII
CDIANPASLDEMAKQATVVLNCVGPYRFYGEPVIKACIENGASCIDISGEPQFLELMQLKYHEKAADKGVYIIGS
SGFDSIPADLGVIYTRNKMNGTLTAVESFLTIHSGPEGLSIHDGTWKSAIYGFGDQSNLRKLRNVSNLKPVPLIG
PKLKRRWPISYCRELKGYSIPFMGSDVSVVRRTQRYLYENLEESPVQYAAYVTVGGITSVIKLMFAGLFFLFFVR
FGIGRQLLIKFPWFFSFGYFSKQGPTQKQIDAASFTLTFFGQGYSQGTGTDKNKPNIKICTQVKGPEAGYVATPI
AMVQAAMTLLSDASHLPKAGGVFTPGAAFSKTKLIDRLNKHGIEFSVISSSEV

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FIGURE 386

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CTCAAACACCGCCTGCTAAAAATACCCGACTGGAGGAGCATAAAAGCGCAGCCGAGCCCAGCGCCCCGCACTTTT
CTGAGCAGACGTCCAGAGCAGAGTCAGCCAGCATGACCGAGCGCCGCGTCCCCTTCTCGCTCCTGCGGGGCCCCA
GCTGGGACCCCTTCCGCGACTGGTACCCGCATAGCCGCCTCTTCGACCAGGCCTTCGGGCTGCCCCGGCTGCCGG
AGGAGTGGTCGCAGTGGTTAGGCGGCAGCAGCTGGCCAGGCTACGTGCGCCCCCTGCCCCCCGCCGCCATCGAGA
GCCCCGCAGTGGCCGCGCCCGCCTACAGCCGCGCGCTCAGCCGGCAACTCAGCAGCGGGGTCTCGGAGATCCGGC
ACACTGCGGACCGCTGGCGCGTGTCCCTGGATGTCAACCACTTCGCCCCGGACGAGCTGACGGTCAAGACCAAGG
ATGGCGTGGTGGAGATCACCGGCAAGCACGAGGAGCGGCAGGACGAGCATGGCTACATCTCCCGGTGCTTCACGC
GGAAATACACGCTGCCCCCCGGTGTGGACCCCACCCAAGTTTCCTCCTCCCTGTCCCCTGAGGGCACACTGACCG
TGGAGGCCCCCATGCCCAAGCTAGCCACGCAGTCCAACGAGATCACCATCCCAGTCACCTTCGAGTCGCGGGCCC
AGCTTGGGGGCCCAGAAGCTGCAAAATCCGATGAGACTGCCGCCAAGTAAAGCCTTAGCCTGGATGCCCACCCCT
GCTGCCGCCACTGGCTGTGCCTCCCCCGCCACCTGTGTGTTCTTTTGATACATTTATCTTCTGTTTTTCTCAAAT
AAAGTTCAAAGCAACCACCTGTAAAAAAAAAAAAAAAAAA
```

FIGURE 387

MTERRVPFSLLRGPSWDPFRDWYPHSRLFDQAFGLPRLPEEWSQWLGGSSWPGYVRPLPPAAIESPAVAAPAYSR
ALSRQLSSGVSEIRHTADRWRVSLDVNHFAPDELTVKTKDGVVEITGKHEERQDEHGYISRCFTRKYTLPPGVDP
TQVSSSLSPEGTLTVEAPMPKLATQSNEITIPVTFESRAQLGGPEAAKSDETAAK

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FIGURE 388

ACTGCGACTCGAGACAGCGGCCCGGCAGGACAGCTCCAGA**ATG**AAAATGCGGTTCTTGGGGTTGGTGGTCTGTTT
GGTTCTCTGGCCCCTGCATTCTGAGGGGTCTGGAGGGAAACTGACAGCTGTGGATCCTGAAACAAACATGAATGT
GAGTGAAATTATCTCTTACTGGGGATTCCCTAGTGAGGAATACCTAGTTGAGACAGAAGATGGATATATTCTGTG
CCTTAACCGAATTCCTCATGGGAGGAAGAACCATTCTGACAAAGGTCCCAAACCAGTTGTCTTCCTGCAACATGG
CTTGCTGGCAGATTCTAGTAACTGGGTCACAAACCTTGCCAACAGCAGCCTGGGCTTCATTCTTGCTGATGCTGG
TTTTGACGTGTGGATGGGCAACAGCAGAGGAAATACCTGGTCTCGGAAACATAAGACACTCTCAGTTTCTCAGGA
TGAATTCTGGGCTTTCAGTTATGATGAGATGGCAAAATATGACCTACCAGCTTCCATTAACTTCATTCTGAATAA
AACTGGCCAAGAACAAGTGTATTATGTGGGTCATTCTCAAGGCACCACTATAGGTTTTATAGCATTTTCACAGAT
CCCTGAGCTGGCTAAAAGGATTAAAATGTTTTTTGCCCTGGGTCCTGTGGCTTCCGTCGCCTTCTGTACTAGCCC
TATGGCCAAATTAGGACGATTACCAGATCATCTCATTAAGGACTTATTTGGAGACAAAGAATTTCTTCCCCAGAG
TGCGTTTTTGAAGTGGCTGGGTACCCACGTTTGCACTCATGTCATACTGAAGGAGCTCTGTGGAAATCTCTGTTT
TCTTCTGTGTGGATTTAATGAGAGAAATTTAAATATGTCTAGAGTGGATGTATATACAACACATTCTCCTGCTGG
AACTTCTGTGCAAAACATGTTACACTGGAGCCAGGCTGTTAAATTCCAAAAGTTTCAAGCCTTTGACTGGGGAAG
CAGTGCCAAGAATTATTTTCATTACAACCAGAGTTATCCTCCCACATACAATGTGAAGGACATGCTTGTGCCGAC
TGCAGTCTGGAGCGGGGGTCACGACTGGCTTGCAGATGTCTACGACGTCAATATCTTACTGACTCAGATCACCAA
CTTGGTGTTCCATGAGAGCATTCCGGAATGGGAGCATCTTGACTTCATTGGGGCCTGGATGCCCCTTGGAGGCT
TTATAATAAAATTATTAATCTAATGAGGAAATATCAG**TGA**AAGCTGGACTTGAGCTGTGTACCACCAAGTCAATG
ATTATGTCATGTGAAAATGTGTTTGCTTCATTTCTGTAAAACACTTGTTTTTCTTTCCCAGGTCTTTTGTTTTTT
TATATCCAAGAAAATGATAACTTTGAAGATGCCCAGTTCACTCTAGTTTCAATTAGAAACATACTAGCTATTTTT
TCTTTAATTAGGGCTGGAATAGGAAGCCAGTGTCTCAACCATAGTATTGTCTCTTTAAGTCTTTTAAATATCACT
GATGTGTAAAAAGGTCATTATATCCATTCTGTTTTTAAAATTTAAAATATATTGACTTTTTGCCCTTCATAGGAC
AAAGTAATATATGTGTTGGAATTTTAAAATTGTGTTGTCATTGGTAAATCTGTCACTGACTTAAGCGAGGTATAA
AAGTACGCAGTTTTCATGTCCTTGCCTTAAAGAGCTCTCTAGTCTAACGGTCTTGTAGTTAGAGATCTAAATGAC
ATTTATCATGTTTTCCTGCAGCAGGTGCATAGTCAAATCCAGAAATATCACAGCTGTGCCAGTAATAAGGATGC
TAACAATTAATTTTATCAAACCTAACTGTGACAGCTGTGATTTGACACGTTTTAATTGCTCAGGTTAAATGAAAT
AGTTTTCCGGCGTCTTCAAAAACAAATTGCACTGATAAAACAAAAACAAAAGTATGTTTTAAATGCTTTGAAGAC
TGATACACTCAACCATCTATATTCATGAGCTCTCAATTTCATGGCAGGCCATAGTTCTACTTATCTGAGAAGCAA
ATCCCTGTGGAGACTATACCACTATTTTTTCTGAGATTAATGTACTCTTGGAGCCCGCTACTGTCGTTATTGATC
ACATCTGTGTGAAGCCAAAGCCCCGTGGTTGCCCATGAGAAGTGTCCTTGTTCATTTTCACCCAAATGAAGTGTG
AACGTGATGTTTTCGGATGCAAACTCAGCTCAGGGATTCATTTTGTGTCTTAGTTTTATATGCATCCTTATTTTT
AATACACCTGCTTCACGTCCCTATGTTGGGAAGTCCATATTTGTCTGCTTTTCTTGCAGCATCATTTCCTTACAA
TACTGTCCGGTGGACAAAATGACAATTGATATGTTTTTCTGATATAATTACTTTAGCTGCACTAACAGTACAATG
CTTGTTAATGGTTAATATAGGCAGGGCGAATACTACTTTGTAACTTTTAAAGTCTTAAACTTTTCAATAAAATTG
AGTGAGACTTATAGGCCC

FIGURE 389

MKMRFLGLVVCLVLWPLHSEGSGGKLTAVDPETNMNVSEIISYWGFPSEEYLVETEDGYILCLNRIPHGRKNHSD
KGPKPVVFLQHGLLADSSNWVTNLANSSLGFILADAGFDVWMGNSRGNTWSRKHKTLSVSQDEFWAFSYDEMAKY
DLPASINFILNKTGQEQVYYVGHSQGTTIGFIAFSQIPELAKRIKMFFALGPVASVAFCTSPMAKLGRLPDHLIK
DLFGDKEFLPQSAFLKWLGTHVCTHVILKELCGNLCFLLCGFNERNLNMSRVDVYTTHSPAGTSVQNMLHWSQAV
KFQKFQAFDWGSSAKNYFHYNQSYPPTYNVKDMLVPTAVWSGGHDWLADVYDVNILLTQITNLVFHESIPEWEHL
DFIWGLDAPWRLYNKIINLMRKYQ

FIGURE 390

CGCAGGCTGGAAGGAAGACGAACCTACGAAGCAGAGATCTGAAGACAGC**ATG**TACACAGCCATTCCCCAGAGTGG
CTCTCCATTCCCAGGCTCAGTGCAGGATCCAGGCCTGCATGTGTGGCGGGTGGAGAAGCTGAAGCCGGTGCCTGT
GGCGCAAGAGAACCAGGGCGTCTTCTTCTCGGGGGACTCCTACCTAGTGCTGCACAATGGCCCAGAAGAGGTTTC
CCATCTGCACCTGTGGATAGGCCAGCAGTCATCCCGGGATGAGCAGGGGGCCTGTGCCGTGCTGGCTGTGCACCT
CAACACGCTGCTGGGAGAGCGGCCTGTGCAGCACCGCGAGGTGCAGGGCAATGAGTCTGACCTCTTCATGAGCTA
CTTCCCACGGGGCCTCAAGTACCAGGAAGGTGGTGTGGAGTCAGCATTTCACAAGACCTCCACAGGAGCCCCAGC
TGCCATCAAGAAACTCTACCAGGTGAAGGGGAAGAAGAACATCCGTGCCACCGAGCGGGCACTGAACTGGGACAG
CTTCAACACTGGGGACTGCTTCATCCTGGACCTGGGCCAGAACATCTTCGCCTGGTGTGGTGGAAAGTCCAACAT
CCTGGAACGCAACAAGGCGAGGGACCTGGCCCTGGCCATCCGGGACAGTGAGCGACAGGGCAAGGCCCAGGTGGA
GATTGTCACTGATGGGGAGGAGCCTGCTGAGATGATCCAGGTCCTGGGCCCCAAGCCTGCTCTGAAGGAGGGCAA
CCCTGAGGAAGACCTCACAGCTGACAAGGCAAATGCCCAGGCCGCAGCTCTGTATAAGGTCTCTGATGCCACTGG
ACAGATGAACCTGACCAAGGTGGCTGACTCCAGCCCCTTTGCCCTTGAACTGCTGATATCTGATGACTGCTTTGT
GCTGGACAACGGGCTCTGTGGCAAGATCTATATCTGGAAGGGGCGAAAAGCGAATGAGAAGGAGCGGCAGGCAGC
CCTGCAGGTGGCCGAGGGCTTCATCTCGCGCATGCAGTACGCCCCGAACACTCAGGTGGAGATTCTGCCTCAGGG
CCGTGAGAGTCCCATCTTCAAGCAATTTTTCAAGGACTGGAAA**TGA**GGGTGGGCGTCTTCCTGCCCCATGCTCCC
CTGCCCCCCACCACCTGCCTGCTTGCTTCTCTGGCTGCCTGGTCAGTGCAGAGGTGCCCCCTGCAGATGTTCAAT
AAAGGAGACAAGTGCTTTCCC

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FIGURE 391

MYTAIPQSGSPFPGSVQDPGLHVWRVEKLKPVPVAQENQGVFFSGDSYLVLHNGPEEVSHLHLWIGQQSSRDEQG
ACAVLAVHLNTLLGERPVQHREVQGNESDLFMSYFPRGLKYQEGGVESAFHKTSTGAPAAIKKLYQVKGKKNIRA
TERALNWDSFNTGDCFILDLGQNIFAWCGGKSNILERNKARDLALAIRDSERQGKAQVEIVTDGEEPAEMIQVLG
PKPALKEGNPEEDLTADKANAQAAALYKVSDATGQMNLTKVADSSPFALELLISDDCFVLDNGLCGKIYIWKGRK
ANEKERQAALQVAEGFISRMQYAPNTQVEILPQGRESPIFKQFFKDWK

FIGURE 392

CCGGTCCTGAGACACGCTGTGTGGCTGAAAAGTGAAGGCAAGAGCTCATTTGGCCTCTGTGCTCCCCTCCGCAAG
GGATCGTTTCTCCAGAAGAGCTGGATATTCTTTCGCCCAGTT**ATG**GCAGACAAGTTAACGAGAATTGCTATTGTC
AACCATGACAAATGTAAACCTAAGAAATGTCGACAGGAATGCAAAAAGAGTTGTCCTGTAGTTCGAATGGGAAAA
TTATGCATAGAGGTTACACCCCAGAGCAAAATAGCATGGATTTCCGAAACTCTTTGTATTGGTTGTGGTATCTGT
ATTAAGAAATGCCCCTTTGGCGCCTTATCAATTGTCAATCTACCAAGCAACTTGGAAAAAGAAACCACACATCGA
TATTGTGCCAATGCCTTCAAACTTCACAGGTTGCCTATCCCTCGTCCAGGTGAAGTTTTGGGATTAGTTGGAACT
AATGGTATTGGAAAGTCAGCTGCTTTAAAAATTTTAGCAGGAAACAAAAGCCAAACCTTGGAAAGTACGATGAT
CCTCCTGACTGGCAGGAGATTTTGACTTATTTCCGTGGATCTGAATTACAAAATTACTTTACAAAGATTCTAGAA
GATGACCTAAAAGCCATCATCAAACCTCAATATGTAGCCAGATTCCTAAGGCTGGCAAAGGGGACAGTGGGATCT
ATTTTGGACCGAAAAGATGAAACAAAGACACAGGCAATTGTATGTCAGCAGCTTGATTTAACCCACCTAAAAGAA
CGAAATGTTGAAGATCTTTCAGGAGGAGAGTTGCAGAGATTTGCTTGTGCTGTCGTTTGCATACAGAAAGCTGAT
ATTTTCATGTTTGATGAGCCTTCTAGTTACCTAGATGTCAAGCAGCGTTTAAAGGCTGCTATTACTATACGATCT
CTAATAAATCCAGATAGATATATCATTGTGGTGGAACATGATCTAAGTGTATTAGACTATCTCTCCGACTTCATC
TGCTGTTTATATGGTGTACCAAGCGCCTATGGAGTTGTCACTATGCCTTTTAGTGTAAGAGAAGGCATAAACATT
TTTTTGGATGGCTATGTTCCAACAGAAAACTTGAGATTCAGAGATGCATCACTTGTTTTTAAAGTGGCTGAGACA
GCAAATGAAGAAGAAGTTAAAAAGATGTGTATGTATAAATATCCAGGAATGAAGAAAAAAATGGGAGAATTTGAG
CTAGCAATTGTAGCTGGAGAGTTTACAGATTCTGAAATTATGGTGATGCTGGGGGAAAATGGAACGGGTAAAACG
ACATTTATCAGAATGCTTGCTGGAAGACTTAAACCTGATGAAGGAGGAGAAGTACCAGTTCTAAATGTCAGTTAT
AAGCCACAGAAAATTAGTCCCAAATCAACTGGAAGTGTTCGCCAGTTACTACATGAAAAGATAAGAGATGCTTAT
ACTCACCCACAATTTGTGACCGATGTAATGAAGCCTCTGCAAATTGAAAACATCATTGATCAAGAGGTGCAGACA
TTATCTGGTGGTGAACTACAGCGAGTACGTTTACGCCTTTGCTTGGGCAAACCTGCTGATGTCTATTTAATTGAT
GAACCATCTGCATATTTGGATTCTGAGCAAAGACTGATGGCAGCTCGAGTTGTCAAACGTTTCATACTCCATGCA
AAAAAGACAGCCTTTGTTGTGGAACATGACTTCATCATGGCCACCTATCTAGCGGATCGCGTCATCGTTTTTGAT
GGTGTTCCATCTAAGAACACAGTTGCAAACAGTCCTCAAACCCTTTTGGCTGGCATGAATAAATTTTTGTCTCAG
CTTGAAATTACATTCAGAAGAGATCCAAACAACTATAGGCCACGAATAAACAAACTTAATTCAATTAAGGATGTA
GAACAAAGAAGAGTGGAAACTACTTTTTCTTGGATGAT**TAG**ACTGACTCTGAGAATATTGATAAGCCATTTATT
AAAAGGAGTATTTACTAGAATTTTTTGTCATATAAAACTTGAATCAGGATTTTATGCCCCACATACTCTGGAACT
TGAAGTATAATATACTTAATATAACATAAAAAGCCAGTTGGGTTCTAAATTGTAGTTGAAACACAGAAAATGCCA
CTTTTCTGTTCCTGAAGAGGCTCTTTTGTGCATAATATTCTAAAATGAAGACATTTCAAGCTATACAAATTACTT
CCAAGTTTTCATGATGTATGGGAAGATTTTCAGTAGGTGTATTATATTCACGGTACCAAATGCTGACCAGTGTTG
CTCCATTTTTTAAATCTTGAAAAGGGTTTCTGTACTTACCTGGTTTGCCAAGTATGCCAGTGTAATGAAACTGCC
CTTATTTTAAAAGCCAGTCAAAGATTCCACTGATTGACATTTGATAAATAAACATCAGGATTATGTTTATTGTTT
GTTTTCAGTCTTTGCACTATATTACCAGTATATGGTTTCCGAGGAAGATTATCTACTGCAAAACACCACTGTTGG
AAAAATAGGTATTTTTAAATTGTTTTAATCCTTTTTTGGTGCTTTTAAACATGTTTAAGCAAAAACCAATTCAG
TCCATTCCCCGCAAAAAACCCCTAACTTTACTCTGAACTTTTTTTGTTTTTGCATTCCATGAGGTTCTGTATTCA
GTCATTCTCTAGGTAATGTCATTTTTGTACACATATATTTATATAATCACTGATTGAGATTTAGGAAAAAGCATT
TCTAAAGAATATTTGCTTCCCTTAGAACTACAGACTCGAAATCTTTAAAGATGGTGCCTAAGCATCTATGTATTT
TTTTTAAGTTCCACAGATTTTTCTGTTGGGCAGGCCAAGGATTATAAACCACTTCCCTAAAGGCAACATTAATGC
AAAAGTCCCCAGATGGCAATACAAAGTATCCCCTGGTACCACATATATTCATTTGTGAGTTTGGATATAGAGCAC
ATTATCTAAACCATTTTGTAGTTCCAAAAACCCATCTAAATTTCTTGAGTTCCTGAATTTTGAACAGGATTACCT
GGAGCCTGGAGCCACTTTAAGTTGTACTTCTGACTAAACTGGAATTATGAGTGAGGAAGAGTGTTTACTAAATAA
ATGACTGGGGCAAGCAAAATTGAGGAGGAAATTAGAAACTGTTTGACAAACTTTAAGAGCTACTTGAAATAACAG
AAGTCTTGATTAATATGCAAATAATGGCTAGAAGTATGGTTTAACTGGACCCTATTATGCCTTTTAAAAATAAT
TTCAGTAACCCATAAATACATGTTGTAAAAAATTCAAATATACAGAATGGAATAAAAAAATGATCTCCCTTTATT
ACCCTCCCAAAGGTTACCAGCGTTTGAATTTAATAATGTATATTCTTTCATGCTTTTTTCTGTGCACTTACCTAA
GTGTGAATATGTAAAGGGTTTGTTTTGTATACAAATGGGATTATACTAAAATAAGTAATGCCTATTTTTAAGGAT
AGGTTAAATTTGTGAATGATCATTTCAAATATATTGAATAAAATAAGCAAAGCTATTGTTATTTACTGATCCTG
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 393

MADKLTRIAIVNHDKCKPKKCRQECKKSCPVVRMGKLCIEVTPQSKIAWISETLCIGCGICIKKCPFGALSIVNL
PSNLEKETTHRYCANAFKLHRLPIPRPGEVLGLVGTNGIGKSAALKILAGKQKPNLGKYDDPPDWQEILTYFRGS
ELQNYFTKILEDDLKAIIKPQYVARFLRLAKGTVGSILDRKDETKTQAIVCQQLDLTHLKERNVEDLSGGELQRF
ACAVVCIQKADIFMFDEPSSYLDVKQRLKAAITIRSLINPDRYIIVVEHDLSVLDYLSDFICCLYGVPSAYGVVT
MPFSVREGINIFLDGYVPTENLRFRDASLVFKVAETANEEEVKKMCMYKYPGMKKKMGEFELAIVAGEFTDSEIM
VMLGENGTGKTTFIRMLAGRLKPDEGGEVPVLNVSYKPQKISPKSTGSVRQLLHEKIRDAYTHPQFVTDVMKPLQ
IENIIDQEVQTLSGGELQRVRLRLCLGKPADVYLIDEPSAYLDSEQRLMAARVVKRFILHAKKTAFVVEHDFIMA
TYLADRVIVFDGVPSKNTVANSPQTLLAGMNKFLSQLEITFRRDPNNYRPRINKLNSIKDVEQKKSGNYFFLDD

FIGURE 394

AGAGCGATC**ATG**TCGCACAAACAAATTTACTATTCGGACAAATACGACGACGAGGAGTTTGAGTATCGACATGTC
ATGCTGCCCAAGGACATAGCCAAGCTGGTCCCTAAAACCCATCTGATGTCTGAATCTGAATGGAGGAATCTTGGC
GTTCAGCAGAGTCAGGGATGGGTCCATTATATGATCCATGAACCAGAACCTCACATCTTGCTGTTCCGGCGCCCA
CTACCCAAGAAACCAAAGAAA**TGA**AGCTGGCAAGCTACTTTTCAGCCTCAAGCTTTACACAGCTGTCCTTACTTC
CTAACATCTTTCTGATAACATTATTATGTTGCCTTCTTGTTTCTCACTTTGATATTTAAAAGATGTTCAATACAC
TGTTTGAATGTGCTGGTAACTGCTTTGCTTCTTGAGTAGAGCCACCACCACCATAGCCCAGCCAGATGAGTGCTC
TGTGGACCCACAGCCTAAGCTGAGTGTGACCCCAGAAGCCACGATGTGCTCTGTATCCAGAACACACTTGGCAGA
TGGAGGAAGCATCTGAGTTTGAGACCATGGCTGTTACAGGGATCATGTAAACTTGCTGTTTTTGTTTTTTCTGCC
GGGTGTTGTATGTGTGGTGACTTGCGGATTTATGTTTCAGTGTACTGGAAACTTTCCATTTTATTCAAGAAATCT
GTTCATGTTAAAAGCCTTGATTAAAGAGGAAGTTTTTATAAT

FIGURE 395

MSHKQIYYSDKYDDEEFEYRHVMLPKDIAKLVPKTHLMSESEWRNLGVQQSQGWVHYMIHEPEPHILLFRRPLPK
KPKK

FIGURE 396

AGCCAGAAATGTGAAGTGCTAGCTGAAGGATGAGCAGCAGCTAGCCAGGCAAAGGGGGCA**ATG**GCGGCTTCCTGT
GTTCTACTGCACACTGGGCAGAAGATGCCTCTGATTGGTCTGGGTACCTGGAAGAGTGAGCCTGGTCAGGTAAAA
GCAGCTGTTAAGTATGCCCCTTAGCGTAGGCTACCGCCACATTGATTGTGCTGCTATCTACGGCAATGAGCCTGAG
ATTGGGGAGGCCCTGAAGGAGGACGTGGGACCAGGCAAGGCGGTGCCTCGGGAGGAGCTGTTTGTGACATCCAAG
CTGTGGAACACCAAGCACCACCCCGAGGATGTGGAGCCTGCCCTCCGGAAGACTCTGGCTGACCTCCAGCTGGAG
TATCTGGACCTGTACCTGATGCACTGGCCTTATGCCTTTGAGCGGGGAGACAACCCCTTCCCCAAGAATGCTGAT
GGGACTATATGCTACGACTCCACCCACTACAAGGAGACTTGGAAGGCTCTGGAGGCACTGGTGGCTAAGGGGCTG
GTGCAGGCGCTGGGCCTGTCCAACTTCAACAGTCGGCAGATTGATGACATACTCAGTGTGGCCTCCGTGCGTCCA
GCTGTCTTGCAGGTGGAATGCCACCCATACTTGGCTCAAAATGAGCTAATTGCCCACTGCCAAGCACGTGGCTTG
GAGGTAACTGCTTATAGCCCTTTGGGCTCCTCTGATCGTGCATGGCGTGATCCTGATGAGCCTGTCCTGCTGGAG
GAACCAGTAGTCCTGGCATTGGCTGAAAAGTATGGCCGATCTCCAGCTCAGATCTTGCTCAGGTGGCAGGTCCAG
CGGAAAGTGATCTGCATCCCCAAAAGTATCACTCCTTCTCGAATCCTTCAGAACATCAAGGTGTTTGACTTCACC
TTTAGCCCAGAAGAGATGAAGCAGCTAAATGCCCTGAACAAAAATTGGAGATATATTGTGCCTATGCTTACGGTG
GATGGGAAGAGAGTCCCAAGGGATGCAGGGCATCCTCTGTACCCCTTTAATGACCCGTAC**TGA**GACCACAGCTTC
TTGGCCTCCCTTCCAGCTCTGCAGCTAATGAGGTCCTGCCACAACGGAAAGAGGGAGTTAATAAAGCCATTGGAG
CATCCAT

FIGURE 397

MAASCVLLHTGQKMPLIGLGTWKSEPGQVKAAVKYALSVGYRHIDCAAIYGNEPEIGEALKEDVGPGKAVPREEL
FVTSKLWNTKHHPEDVEPALRKTLADLQLEYLDLYLMHWPYAFERGDNPFPKNADGTICYDSTHYKETWKALEAL
VAKGLVQALGLSNFNSRQIDDILSVASVRPAVLQVECHPYLAQNELIAHCQARGLEVTAYSPLGSSDRAWRDPDE
PVLLEEPVVLALAEKYGRSPAQILLRWQVQRKVICIPKSITPSRILQNIKVFDFTFSPEEMKQLNALNKNWRYIV
PMLTVDGKRVPRDAGHPLYPFNDPY

FIGURE 398

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GCGGCGCTCGCGCCAAGGGACGTGTTTCTGCGCTCGCGTGGTCATGGAGGCGCTGCCGCTGCTAGCCGCGACAAC
TCCGGACCACGGCCGCCACCGAAGGCTGCTTCTGCTGCCGCTACTGCTGTTCCTGCTGCCGGCTGGAGCTGTGCA
GGGCTGGGAGACAGAGGAGAGGCCCCGGACTCGCGAAGAGGAGTGCCACTTCTACGCGGGTGGACAAGTGTACCC
GGGAGAGGCATCCCGGGTATCGGTCGCCGACCACTCCCTGCACCTAAGCAAAGCGAAGATTTCCAAGCCAGCGCC
CTACTGGGAAGGAACAGCTGTGATCGATGGAGAATTTAAGGAGCTGAAGTTAACTGATTATCGTGGGAAATACTT
GGTTTTCTTCTTCTACCCACTTGATTTCACATTTGTGTGTCCAACTGAAATTATCGCTTTTGGCGACAGACTTGA
AGAATTCAGATCTATAAATACTGAAGTGGTAGCATGCTCTGTTGATTCACAGTTTACCCATTGGCCTGGATTAA
TACCCCTCGAAGACAAGGAGGACTTGGGCCAATAAGGATTCCACTTCTTTCAGATTTGACCCATCAGATCTCAAA
GGACTATGGTGTATACCTAGAGGACTCAGGCCACACTCTTAGAGGTCTCTTCATTATTGATGACAAAGGAATCCT
AAGACAAATTACTCTGAATGATCTTCCTGTGGGTAGATCAGTGGATGAGACACTACGTTTGGTTCAAGCATTCCA
GTACACTGACAAACACGGAGAAGTCTGCCCTGCTGGCTGGAAACCTGGTAGTGAAACAATAATCCCAGATCCAGC
TGGAAAGCTGAAGTATTTCGATAAACTGAATTGAGAAATACTTCTTCAAGTTATGATGCTTGAAAGTTCTCAATA
AAGTTCACGGTTTCATTACCA
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FIGURE 399

MEALPLLAATTPDHGRHRRLLLLPLLLFLLPAGAVQGWETEERPRTREEECHFYAGGQVYPGEASRVSVADHSLH
LSKAKISKPAPYWEGTAVIDGEFKELKLTDYRGKYLVFFFYPLDFTFVCPTEIIAFGDRLEEFRSINTEVVACSV
DSQFTHLAWINTPRRQGGLGPIRIPLLSDLTHQISKDYGVYLEDSGHTLRGLFIIDDKGILRQITLNDLPVGRSV
DETLRLVQAFQYTDKHGEVCPAGWKPGSETIIPDPAGKLKYFDKLN

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FIGURE 400

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CCGCTGGGCGTAGCTGCGACTCGGCGGAGTCCCGGCGGCGCGTCCTTGTTCTAACCCGGCGCGCCATGACCGTCG
CGCGGCCGAGCGTGCCCGCGGCGCTGCCCCTCCTCGGGGAGCTGCCCCGGCTGCTGCTGCTGGTGCTGTTGTGCC
TGCCGGCCGTGTGGGGTGACTGTGGCCTTCCCCCAGATGTACCTAATGCCCAGCCAGCTTTGGAAGGCCGTACAA
GTTTTCCCGAGGATACTGTAATAACGTACAAATGTGAAGAAAGCTTTGTGAAAATTCCTGGCGAGAAGGACTCAG
TGATCTGCCTTAAGGGCAGTCAATGGTCAGATATTGAAGAGTTCTGCAATCGTAGCTGCGAGGTGCCAACAAGGC
TAAATTCTGCATCCCTCAAACAGCCTTATATCACTCAGAATTATTTTCCAGTCGGTACTGTTGTGGAATATGAGT
GCCGTCCAGGTTACAGAAGAGAACCTTCTCTATCACCAAAACTAACTTGCCTTCAGAATTTAAAATGGTCCACAG
CAGTCGAATTTTGTAAAAAGAAATCATGCCCTAATCCGGGAGAAATACGAAATGGTCAGATTGATGTACCAGGTG
GCATATTATTTGGTGCAACCATCTCCTTCTCATGTAACACAGGGTACAAATTATTTGGCTCGACTTCTAGTTTTT
GTCTTATTTCAGGCAGCTCTGTCCAGTGGAGTGACCCGTTGCCAGAGTGCAGAGAAATTTATTGTCCAGCACCAC
CACAAATTGACAATGGAATAATTCAAGGGGAACGTGACCATTATGGATATAGACAGTCTGTAACGTATGCATGTA
ATAAAGGATTCACCATGATTGGAGAGCACTCTATTTATTGTACTGTGAATAATGATGAAGGAGAGTGGAGTGGCC
CACCACCTGAATGCAGAGGAAAATCTCTAACTTCCAAGGTCCCACCAACAGTTCAGAAACCTACCACAGTAAATG
TTCCAACTACAGAAGTCTCACCAACTTCTCAGAAAACCACCACAAAAACCACCACACCAAATGCTCAAGCAACAC
GGAGTACACCTGTTTCCAGGACAACCAAGCATTTTCATGAAACAACCCCAAATAAAGGAAGTGGAACCACTTCAG
GTACTACCCGTCTTCTATCTGGGCACACGTGTTTCACGTTGACAGGTTTGCTTGGGACGCTAGTAACCATGGGCT
TGCTGACTTAGCCAAAGAAGAGTTAAGAAGAAAATACACACAAGTATACAGACTGTTCCTAGTTTCTTAGACTTA
TCTGCATATTGGATAAAATAAATGCAATTGTGCTCTTCATTTAGGATGCTTTCATTGTCTTTAAGATGTGTTAGG
AATGTCAACAGAGCAAGGAGAAAAAAGGCAGTCCTGGAATCACATTCTTAGCACACCTACACCTCTTGAAAATAG
AACAACTTGCAGAATTGAGAGTGATTCCTTTCCTAAAAGTGTAAGAAAGCATAGAGATTTGTTCGTATTTAGAAT
GGGATCACGAGGAAAAGAGAAGGAAAGTGATTTTTTTCCACAAGATCTGTAATGTTATTTCCACTTATAAAGGAA
ATAAAAAATGAAAACATTATTTGGATATCAAAAGCAAATAAAAAACCCAATTCAGTCTCTTCTAAGCAAAATTGC
TAAAGAGAGATGAACCACATTATAAAGTAATCTTTGGCTGTAAGGCATTTTCATCTTTCCTTCGGGTTGGCAAAA
TATTTTAAAGGTAAAACATGCTGGTGAACCAGGGGTGTTGATGGTGATAAGGGAGGAATATAGAATGAAAGACTG
AATCTTCCTTTGTTGCACAAATAGAGTTTGGAAAAAGCCTGTGAAAGGTGTCTTCTTTGACTTAATGTCTTTAAA
AGTATCCAGAGATACTACAATATTAACATAAGAAAAGATTATATATTATTTCTGAATCGAGATGTCCATAGTCAA
ATTTGTAAATCTTATTCTTTTGTAATATTTATTTATATTTATTTATGACAGTGAACATTCTGATTTTACATGTAA
AACAAGAAAGTTGAAGAAGATATGTGAAGAAAAATGTATTTTTCCTAAATAGAAATAAATGATCCCATTTTTTG
GT
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FIGURE 401

MTVARPSVPAALPLLGELPRLLLLVLLCLPAVWGDCGLPPDVPNAQPALEGRTSFPEDTVITYKCEESFVKIPGE
KDSVICLKGSQWSDIEEFCNRSCEVPTRLNSASLKQPYITQNYFPVGTVVEYECRPGYRREPSLSPKLTCLQNLK
WSTAVEFCKKKSCPNPGEIRNGQIDVPGGILFGATISFSCNTGYKLFGSTSSFCLISGSSVQWSDPLPECREIYC
PAPPQIDNGIIQGERDHYGYRQSVTYACNKGFTMIGEHSIYCTVNNDEGEWSGPPPECRGKSLTSKVPPTVQKPT
TVNVPTTEVSPTSQKTTTKTTTPNAQATRSTPVSRTTKHFHETTPNKGSGTTSGTTRLLSGHTCFTLTGLLGTLV
TMGLLT

FIGURE 402

ATGTTCCGAGCGGCGGCTCCGGGGCAGCTCCGGCGGGCGGCCTCATTGCTACGATTTCAGAGTACCCTGGTAATA
GCTGAGCATGCAAATGATTCCCTAGCACCCATTACTTTAAATACCATTACTGCAGCCACACGCCTTGGAGGTGAA
GTGTCCTGCTTAGTAGCTGGAACCAAATGTGACAAGGTGGCACAAGATCTCTGTAAAGTAGCAGGCATAGCAAAA
GTTCTGGTGGCTCAGCATGATGTGTACAAAGGCCTACTTCCAGAGGAACTGACACCATTGATTTTGGCAACTCAG
AAGCAGTTCAATTACACACACATCTGTGCTGGAGCATCTGCCTTCGGAAAGAACCTTTTGCCCAGAGTAGCAGCC
AAACTTGAGGTTGCCCCGATTTCTGACATCATTGCAATCAAGTCACCTGACACATTTGTGAGAACTATTTATGCA
GGAAATGCTCTATGTACAGTGAAGTGTGATGAGAAAGTGAAAGTGTTTTCTGTCCGTGGAACATCCTTTGATGCT
GCAGCAACAAGTGGCGGTAGTGCCAGTTCAGAAAAGGCATCAAGTACTTCACCAGTGGAAATATCAGAGTGGCTT
GACCAGAAATTAACAAAAAGTGATCGACCAGAGCTAACAGGTGCCAAAGTGGTGGTATCTGGTGGTCGAGGCTTG
AAGAGTGGAGAGAACTTTAAGTTGTTATATGACTTGGCAGATCAACTACATGCTGCAGTTGGTGCTTCCCGTGCT
GCTGTTGATGCTGGCTTTGTTCCCAATGACATGCAAGTTGGACAGACGGGAAAAATAGTAGCACCAGAACTTTAT
ATTGCTGTTGGAATATCTGGAGCCATCCAACATTTAGCTGGGATGAAAGACAGCAAGACAATTGTGGCAATTAAT
AAAGACCCAGAAGCTCCAATTTTCCAAGTGGCAGATTATGGAATAGTTGCAGATTTATTTAAGGTAGTTCCTGAA
ATGACTGAGATATTGAAGAAAAAA**TGA**ATCAGGATCATGCCTTAAAAAGAAACTTTTGTTAAAGTATTCCACTG
AAATCACAGATATTTGTGGGTATTATAACAATCATTGGAAAGCATGGAGAGCTACATTTCATAATTTGAGGGAAA
ATTTCTAACAGATGCCAGAATGCTTGTTTATGGGATTGCTGTGTTTCCTTTTAATTATTTGTGGTTCCAAACAAT
TATTGTTTGAACTTTTTTAATTCTGTACTAAAATCTATAATAAAGCTTTTCCACAGCTTTAAAACT

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FIGURE 403

MFRAAAPGQLRRAASLLRFQSTLVIAEHANDSLAPITLNTITAATRLGGEVSCLVAGTKCDKVAQDLCKVAGIAK
VLVAQHDVYKGLLPEELTPLILATQKQFNYTHICAGASAFGKNLLPRVAAKLEVAPISDIIAIKSPDTFVRTIYA
GNALCTVKCDEKVKVFSVRGTSFDAAATSGGSASSEKASSTSPVEISEWLDQKLTKSDRPELTGAKVVVSGGRGL
KSGENFKLLYDLADQLHAAVGASRAAVDAGFVPNDMQVGQTGKIVAPELYIAVGISGAIQHLAGMKDSKTIVAIN
KDPEAPIFQVADYGIVADLFKVVPEMTEILKKK

FIGURE 404

CTGATCCGGGCCGGGCGGGAAGTCGGGTCCCGAGGCTCCGGCTCGGCAGACCGGGCGGAAAGCAGCCGAGCGGCC
ATGGAGCTGTGCGGGCTGGGGCTGCCCCGGCCGCCCATGCTGCTGGCGCTGCTGTTGGCGACACTGCTGGCGGCG
ATGTTGGCGCTGCTGACTCAGGTGGCGCTGGTGGTGCAGGTGGCGGAGGCGGCTCGGGCCCCGAGCGTCTCGGCC
AAGCCGGGGCCGGCGCTGTGGCCCCTGCCGCTCTCGGTGAAGATGACCCCGAACCTGCTGCATCTCGCCCCGGAG
AACTTCTACATCAGCCACAGCCCCAATTCCACGGCGGGCCCCTCCTGCACCCTGCTGGAGGAAGCGTTTCGACGA
TATCATGGCTATATTTTTGGTTTCTACAAGTGGCATCATGAACCTGCTGAATTCCAGGCTAAAACCCAGGTTCAG
CAACTTCTTGTCTCAATCACCCTTCAGTCAGAGTGTGATGCTTTCCCCAACATATCTTCAGATGAGTCTTATACT
TTACTTGTGAAAGAACCAGTGGCTGTCCTTAAGGCCAACAGAGTTTGGGGAGCATTACGAGGTTTAGAGACCTTT
AGCCAGTTAGTTTATCAAGATTCTTATGGAACTTTCACCATCAATGAATCCACCATTATTGATTCTCCAAGGTTT
TCTCACAGAGGAATTTTGATTGATACATCCAGACATTATCTGCCAGTTAAGATTATTCTTAAAACTCTGGATGCC
ATGGCTTTTAATAAGTTTAATGTTCTTCACTGGCACATAGTTGATGACCAGTCTTTCCCATATCAGAGCATCACT
TTTCCTGAGTTAAGCAATAAAGGAAGCTATTCTTTGTCTCATGTTTATACACCAAATGATGTCCGTATGGTGATT
GAATATGCCAGATTACGAGGAATTCGAGTCCTGCCAGAATTTGATACCCCTGGGCATACACTATCTTGGGGAAAA
GGTCAGAAAGACCTCCTGACTCCATGTTACAGTAGACAAAACAAGTTGGACTCTTTTGGACCTATAAACCCTACT
CTGAATACAACATACAGCTTCCTTACTACATTTTTCAAAGAAATTAGTGAGGTGTTTCCAGATCAATTCATTCAT
TTGGGAGGAGATGAAGTGGAATTTAAATGTTGGGAATCAAATCCAAAAATTCAAGATTTCATGAGGCAAAAAGGC
TTTGGCACAGATTTTAAGAAACTAGAATCTTTCTACATTCAAAAGGTTTTGGATATTATTGCAACCATAAACAAG
GGATCCATTGTCTGGCAGGAGGTTTTTGATGATAAAGCAAAGCTTGCGCCGGGCACAATAGTTGAAGTATGGAAA
GACAGCGCATATCCTGAGGAACTCAGTAGAGTCACAGCATCTGGCTTCCCTGTAATCCTTTCTGCTCCTTGGTAC
TTAGATTTGATTAGCTATGGACAAGATTGGAGGAAATACTATAAAGTGGAACCTCTTGATTTTGGCGGTACTCAG
AAACAGAAACAACTTTTCATTGGTGGAGAAGCTTGTCTATGGGGAGAATATGTGGATGCAACTAACCTCACTCCA
AGATTATGGCCTCGGGCAAGTGCTGTTGGTGAGAGACTCTGGAGTTCCAAAGATGTCAGAGATATGGATGACGCC
TATGACAGACTGACAAGGCACCGCTGCAGGATGGTCGAACGTGGAATAGCTGCACAACCTCTTTATGCTGGATAT
TGTAACCATGAGAACATG**TAA**AAAATGGAGGGGAAAAAGGCCACAGCAATCTGTACTACAATCAACTTTATTTTG
AAATCATGTAAAATAAGATATTAGACTTTTTTGAATAAAATATTTTTATTGATTGAA

FIGURE 405

MELCGLGLPRPPMLLALLLATLLAAMLALLTQVALVVQVAEAARAPSVSAKPGPALWPLPLSVKMTPNLLHLAPE
NFYISHSPNSTAGPSCTLLEEAFRRYHGYIFGFYKWHHEPAEFQAKTQVQQLLVSITLQSECDAFPNISSDESYT
LLVKEPVAVLKANRVWGALRGLETFSQLVYQDSYGTFTINESTIIDSPRFSHRGILIDTSRHYLPVKIILKTLDA
MAFNKFNVLHWHIVDDQSFPYQSITFPELSNKGSYSLSHVYTPNDVRMVIEYARLRGIRVLPEFDTPGHTLSWGK
GQKDLLTPCYSRQNKLDSFGPINPTLNTTYSFLTTFFKEISEVFPDQFIHLGGDEVEFKCWESNPKIQDFMRQKG
FGTDFKKLESFYIQKVLDIIATINKGSIVWQEVFDDKAKLAPGTIVEVWKDSAYPEELSRVTASGFPVILSAPWY
LDLISYGQDWRKYYKVEPLDFGGTQKQKQLFIGGEACLWGEYVDATNLTPRLWPRASAVGERLWSSKDVRDMDDA
YDRLTRHRCRMVERGIAAQPLYAGYCNHENM

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FIGURE 406

CTGGTCCCGAGCACGAGCTGTGAGGGGATTCACTTGTGTGCGGAACTCCTCGGAACC**ATG**GCGTCCCTTTCCCTT
GCACCTGTTAACATCTTTAAGGCAGGAGCTGATGAAGAGAGAGCAGAGACAGCTCGTCTGACTTCTTTTATTGGT
GCCATCGCCATTGGAGACTTGGTAAAGAGCACCTTGGGACCCAAAGGCATGGACAAAATTCTTCTAAGCAGTGGA
CGAGATGCCTCTCTTATGGTAACCAATGATGGTGCCACTATTCTAAAAAACATTGGTGTTGACAATCCAGCAGCT
AAAGTTTTAGTTGATATGTCAAGGGTTCAAGATGATGAAGTTGGTGATGGCACTACCTCTGTTACCGTTTTAGCA
GCAGAATTATTAAGGGAAGCAGAATCTTTAATTGCAAAAAAGATTCATCCACAGACCATCATAGCGGGTTGGAGA
GAAGCCACGAAGGCTGCAAGAGAGGCGCTGTTGAGTTCTGCAGTTGATCATGGTTCCGATGAAGTTAAATTCCGT
CAAGATTTAATGAATATTGCGGGCACAACATTATCCTCAAAACTTCTTACTCATCACAAAGACCACTTTACAAAG
TTAGCTGTAGAAGCAGTTCTCAGACTGAAAGGCTCTGGCAACCTGGAGGCAATTCATATTATCAAGAAGCTAGGA
GGAAGTTTGGCAGATTCCTATTTAGATGAAGGCTTCCTGTTGGATAAAAAAATTGGAGTAAATCAACCAAAACGA
ATTGAAAATGCTAAAATTCTTATTGCAAATACTGGTATGGATACAGACAAAATAAAGATATTTGGTTCCCGGGTA
AGAGTTGACTCTACAGCAAAGGTTGCAGAAATAGAACATGCGGAAAAGGAAAAAATGAAGGAGAAAGTTGAACGT
ATTCTTAAGCATGGAATAAATTGCTTTATTAACAGGCAATTAATTTATAATTATCCTGAACAGCTCTTTGGTGCT
GCTGGTGTCATGGCTATTGAGCATGCAGATTTTGCAGGTGTGGAACGCCTAGCTCTTGTCACAGGTGGTGAAATT
GCCTCTACCTTTGATCACCCAGAACTGGTGAAGCTTGGAAGTTGCAAACTTATCGAGGAAGTCATGATTGGAGAA
GACAAACTCATTCACTTTTCTGGGGTTGCCCTTGGTGAGGCTTGTACCATTGTTTTGCGTGGTGCCACTCAACAA
ATTTTAGATGAAGCAGAAAGATCATTGCATGATGCTCTTTGTGTTCTTGCGCAAACTGTAAAGGACTCTAGAACA
GTTTATGGAGGAGGCTGTTCTGAGATGTTGATGGCTCATGCTGTGACACAGCTTGCCAATAGAACACCAGGCAAA
GAAGCTGTTGCAATGGAGTCTTATGCTAAAGCACTGAGAATGTTGCCAACCATCATAGCTGACAATGCAGGCTAT
GACAGTGCAGACCTGGTGGCACAGCTCAGGGCTGCTCACAGTGAAGGCAATACCACTGCTGGATTGGATATGAGG
GAAGGCACCATTGGAGATATGGCTATCCTGGGTATAACAGAAAGTTTTCAAGTGAAGCGACAGGTTCTTCTGAGT
GCAGCTGAAGCAGCAGAGGTGATTCTGCGTGTGGACAACATCATCAAAGCGGCACCCAGGAAACGTGTCCCTGAT
CACCACCCCTGT**TAA**GCATTCCCACGTGCTGTCGATCTTTGGACCAGTTTCTAGCAAAGTTGTGTTTGAAAGATA
CTCTATTAAAGAAGACTGTGGAATCTGTTTATCGGTGCCCATTATATCCTTAAGTTTGGATATTTAGCTGACCTT
CGCTTTAACATAGGTCTAATTTATTTGCCGTGTCATTTTCCATACAAATCAGTTGATTTAAAGGAGTTCATTTCG
CATACTGGGCATTAAAATAAAAATTTGAACAATGAAAGGAAAAAAAGGAGAAAAAAAAAA

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FIGURE 407

MASLSLAPVNIFKAGADEERAETARLTSFIGAIAIGDLVKSTLGPKGMDKILLSSGRDASLMVTNDGATILKNIG
VDNPAAKVLVDMSRVQDDEVGDGTTSVTVLAAELLREAESLIAKKIHPQTIIAGWREATKAAREALLSSAVDHGS
DEVKFRQDLMNIAGTTLSSKLLTHHKDHFTKLAVEAVLRLKGSGNLEAIHIIKKLGGSLADSYLDEGFLLDKKIG
VNQPKRIENAKILIANTGMDTDKIKIFGSRVRVDSTAKVAEIEHAEKEKMKEKVERILKHGINCFINRQLIYNYP
EQLFGAAGVMAIEHADFAGVERLALVTGGEIASTFDHPELVKLGSCKLIEEVMIGEDKLIHFSGVALGEACTIVL
RGATQQILDEAERSLHDALCVLAQTVKDSRTVYGGGCSEMLMAHAVTQLANRTPGKEAVAMESYAKALRMLPTII
ADNAGYDSADLVAQLRAAHSEGNTTAGLDMREGTIGDMAILGITESFQVKRQVLLSAAEAAEVILRVDNIIKAAP
RKRVPDHHPC

FIGURE 408A

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GAATCCAAGGGGGGCCAGTTCCTGCCGTCTGCTCTTCTGCCTCTTGATCTCCGCCACCGTCTTCAGGCCAGGCCTT
GGATGGTATACTGTAAATTCAGCATATGGAGATACCATTATCATACCTTGCCGACTTGACGTACCTCAGAATCTC
ATGTTTGGCAAATGGAAATATGAAAAGCCCGATGGCTCCCCAGTATTTATTGCCTTCAGATCCTCTACAAAGAAA
AGTGTGCAGTACGACGATGTACCAGAATACAAAGACAGATTGAACCTCTCAGAAAACTACACTTTGTCTATCAGT
AATGCAAGGATCAGTGATGAAAAGAGATTTGTGTGCATGCTAGTAACTGAGGACAACGTGTTTGAGGCACCTACA
ATAGTCAAGGTGTTCAAGCAACCATCTAAACCTGAAATTGTAAGCAAAGCACTGTTTCTCGAAACAGAGCAGCTA
AAAAAGTTGGGTGACTGCATTTCAGAAGACAGTTATCCAGATGGCAATATCACATGGTACAGGAATGGAAAAGTG
CTACATCCCCTTGAAGGAGCGGTGGTCATAATTTTTAAAAAGGAAATGGACCCAGTGACTCAGCTCTATACCATG
ACTTCCACCCTGGAGTACAAGACAACCAAGGCTGACATACAAATGCCATTCACCTGCTCGGTGACATATTATGGA
CCATCTGGCCAGAAAACAATTCATTCTGAACAGGCAGTATTTGATATTTACTATCCTACAGAGCAGGTGACAATA
CAAGTGCTGCCACCAAAAAATGCCATCAAAGAAGGGGATAACATCACTCTTAAATGCTTAGGGAATGGCAACCCT
CCCCCAGAGGAATTTTTGTTTTACTTACCAGGACAGCCCGAAGGAATAAGAAGCTCAAATACTTACACACTGACG
GATGTGAGGCGCAATGCAACAGGAGACTACAAGTGTTCCCTGATAGACAAAAAAGCATGATTGCTTCAACAGCC
ATCACAGTTCACTATTGGATTTGTCCTTAAACCCAGTGGAGAAGTGACTAGACAGATTGGTGATGCCCTACCC
GTGTCATGCACAATATCTGCTAGCAGGAATGCAACTGTGGTATGGATGAAAGATAACATCAGGCTTCGATCTAGC
CCGTCATTTTCTAGTCTTCATTATCAGGATGCTGGAAACTATGTCTGCGAAACTGCTCTGCAGGAGGTTGAAGGA
CTAAAGAAAAGAGAGTCATTGACTCTCATTGTAGAAGGCAAACCTCAAATAAAAATGACAAAGAAAACTGATCCC
AGTGGACTATCTAAAACAATAATCTGCCATGTGGAAGGTTTTCCAAAGCCAGCCATTCAGTGGACAATTACTGGC
AGTGGAAGCGTCATAAACCAAACAGAGGAATCTCCTTATATTAATGGCAGGTATTATAGTAAAATTATCATTTCC
CCTGAAGAGAATGTTACATTAACTTGCACAGCAGAAAACCAACTGGAGAGAACAGTAAACTCCTTGAATGTCTCT
GCTATAAGTATTCCAGAACACGATGAGGCAGACGAGATAAGTGATGAAAACAGAGAAAAGGTGAATGACCAGGCA
AAACTAATTGTGGGAATCGTTGTTGGTCTCCTCCTTGCTGCCCTTGTTGCTGGTGTCGTCTACTGGCTGTACATG
AAGAAGTCAAAGACTGCATCAAAACATGTAAACAAGGACCTCGGTAATATGGAAGAAACAAAAGTTAGAAGAA
AACAATCACAAAACTGAAGCCTAAGAGAGAAACTGTCCTAGTTGTCCAGAGATAAAAATCATATAGACCAATTGA
AGCATGAACGTGGATTGTATTTAAGACATAAACAAAGACATTGACAGCAATTCATGTTCAAGTATTAAGCAGTTC
ATTCTACCAAGCTGTCACAGGTTTTCAGAGAATTATCTCAAGTAAAACAAATGAAATTTAATTACAAACAATAAG
AACAAGTTTTGGCAGCCATGATAATAGGTCATATGTTGTGTTTGGTTCAATTTTTTTTCCGTAAATGTCTGCACT
GAGGATTTCTTTTTGGTTTGCCTTTTATGTAAATTTTTTACGTAGCTATTTTTATACACTGTAAGCTTTGTTCTG
GGAGTTGCTGTTAATCTGATGTATAATGTAATGTTTTTATTTCAATTGTTTATATGGATAATCTGAGCAGGTACA
TTTCTGATTCTGATTGCTATCAGCAATGCCCCAAACTTTCTCATAAGCACCTAAAACCCAAAGGTGGCAGCTTGT
GAAGATTGGGGACACTCATATTGCCCTAATTAAAAACTGTGATTTTTATCACAAGGGAGGGGAGGCCGAGAGTCA
GACTGATAGACACCATAGGAGCCGACTCTTTGATATGCCACCAGCGAACTCTCAGAAATAAATCACAGATGCATA
TAGACACACATACATAATGGTACTCCCAAACTGACAATTTTACCTATTCTGAAAAGACATAAAACAGAATTTGG
TAGCACTTACCTCTACAGACACCTGCTAATAAATTATTTTCTGTCAAAAGAAAAAACAAGCATGTGTGAGAGA
CAGTTTGGAAAAATCATGGTCAACATTCCCATTTTCATAGATCACAATGTAAATCACTATAATTACAAATTGGTG
TTAAATCCTTTGGGTTATCCACTGCCTTAAAATTATACCTATTTCATGTTTAAAAGATATCAATCAGAATTGGA
GTTTTTAACAGTGGTCATTATCAAAGCTGTGTTATTTCCACAGAATATAGAATATATATTTTTTTCGTGTGTGT
TTTTGTTAACTACCCTACAGATATTGAATGCACCTTGAGATAATTTAGTGTTTTAACTGATACATAATTTATCAA
GCAGTACATGAAAGTGTAATAATAAAATGTCTATGTATCTTTAGTTACATTCAAATTTGTAACTTTATAAACATG
TTTTATGCTTGAGGAAATTTTTAAGGTGGTAGTATAAATGGAAACTTTTTGAAGTAGACCAGATATGGGCTACTT
GTGACTAGACTTTTAAACTTTGCTCTTTCAAGCAGAAGCCTGGTTTCTGGGAGAACACTGCACAGTGATTTCTTT
CCAGGATTTACACAACTTTAAAGGGAAGATAAATGAACATCAGATTTCTAGGTATAGAACTATGTTATTGAAAG
GAAAAGGAAAACTGGTGTTTGTTTCTTAGACTCATGAAATAAAAAATTATGAAGGCAATGAAAAATAAATTGAAA
ATTAAAGTCAGATGAGAATAGGAATAATACTTTGCCACTTCTGCATTATTTAGAAACATACGTTATTGTACATTT
GTAAACCATTTACTGTCTGGGCAATAGTGACTCCGTTTAATAAAAGCTTCCGTAGTGCATTGGTATGGATTAAAT
GCATAAAATATCTTAGACTCGATGCTGTATAAAATATTATGGGAAAAAGAAATACGTTATTTTGCCTCTAAACT
TTTATTGAAGTTTTATTTGGCAGGAAAAAAATTGAATCTTGGTCAACATTTAAACCAAAGTAAAAGGGGAAAAA
CCAAAGTTATTTGTTTTGCATGGCTAAGCCATTCTGTTATCTCTGTAAATACTGTGATTTCTTTTTTATTTTCTC
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FIGURE 408B

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TTTAGAATTTTGTTAAAGAAATTCTAAAATTTTTAAACACCTGCTCTCCACAATAAATCACAAACACTAAAATAA
AATTACTTCCATATAAATATTATTTTCTCTTTTGGTGTGGGAGATCAAAGGTTTAAAGTCTAACTTCTAAGATAT
ATTTGCAGAAAGAAGCAACATGACAATAGAGAGAGTTATGCTACATTATTTCTTGGTTTCCACTTGCAATGGTTA
ATTAAGTCCAAAAACAGCTGTCAGAACCTCGAGAGCAGAACATGAGAAACTCAGAGCTCTGGACCGAAAGCAGAA
AGTTTGCCGGAAAAAAAAAGACCACATTATTACCATCGATTCAGTGCCTGGATAAAGAGGAAAGCTTACTTGTTT
AATGGCAGCCACATGCACGAAGATGCTAAGAAGAAAAAGAATTCCAAATCCTCAACTTTTGAGGTTTCGGCTCTC
CAATTTAACTCTTTGGCAACAGGAAACAGGTTTTGCAAGTTCAAGGTTCACTCCCTATATGTGATTATAGGAATT
GTTTGTGGAAATGGATTAACATACCCGTCTATGCCTAAAAGATAATAAGAAACTGAAATATGTCTTCAAAAAAA
AAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA
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FIGURE 409A

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TCAACACAGGACAATGCAAGCCCATGAGCTGTTCCGGTATTTTCGAATGCCAGAGCTGGTTGACTTCCGACAGTA
CGTGCGTACTCTTCCGACCAACACGCTTATGGGCTTCGGAGCTTTTGCAGCACTCACCACCTTCTGGTACGCCAC
GAGACCCAAACCCCTGAAGCCGCCATGCGACCTCTCCATGCAGTCAGTGGAAGTGGCGGGTAGTGGTGGTGCACG
AAGATCCGCACTACTTGACAGCGACGAGCCCTTGGTGTATTTCTATGATGATGTCACAACATTATACGAAGGTTT
CCAGAGGGGAATACAGGTGTCAAATAATGGCCCTTGTTTAGGCTCTCGGAAACCAGACCAACCCTATGAATGGCT
TTCATATAAACAGGTTGCAGAATTGTCGGAGTGCATAGGCTCAGCACTGATCCAGAAGGGCTTCAAGACTGCCCC
AGATCAGTTCATTGGCATCTTTGCTCAAAATAGACCTGAGTGGGTGATTATTGAACAAGGATGCTTTGCTTATTC
GATGGTGATCGTTCCACTTTATGATACCCTTGGAAATGAAGCCATCACGTACATAGTCAACAAAGCTGAACTCTC
TCTGGTTTTTGTTGACAAGCCAGAGAAGGCCAAACTCTTATTAGAGGGTGTAGAAAATAAGTTAATACCAGGCCT
TAAAATCATAGTTGTCATGGATGCCTACGGCAGTGAACTGGTGGAACGAGGCCAGAGGTGTGGGGTGGAAGTCAC
CAGCATGAAGGCGATGGAGGACCTGGGAAGAGCCAACAGACGGAAGCCCAAGCCTCCAGCACCTGAAGATCTTGC
AGTAATTTGTTTCACAAGTGGAACTACAGGCAACCCCAAAGGAGCAATGGTCACTCACCGAAACATAGTGAGCGA
TTGTTCAGCTTTTGTGAAAGCAACAGAGAATACAGTCAATCCTTGCCCAGATGATACTTTGATATCTTTCTTGCC
TCTCGCCCATATGTTTGAGAGAGTTGTAGAGTGTGTAATGCTGTGTCATGGAGCTAAAATCGGATTTTTCCAAGG
AGATATCAGGCTGCTCATGGATGACCTCAAGGTGCTTCAACCCACTGTCTTCCCCGTGGTTCCAAGACTGCTGAA
CCGGATGTTTGACCGAATTTTCGGACAAGCAAACACCACGCTGAAGCGATGGCTCTTGGACTTTGCCTCCAAGAG
GAAAGAAGCAGAGCTTCGCAGCGGCATCATCAGAAACAACAGCCTGTGGGACCGGCTGATCTTCCACAAAGTACA
GTCGAGCCTGGGCGGAAGAGTCCGGCTGATGGTGACAGGAGCCGCCCCGGTGTCTGCCACTGTGCTGACGTTCCT
CAGAGCAGCCCTGGGCTGTCAGTTTTATGAAGGATACGGACAGACAGAGTGCACTGCCGGGTGCTGCCTAACCAT
GCCTGGAGACTGGACCGCAGGCCATGTTGGGGCCCCGATGCCGTGCAATTTGATAAAACTTGTTGATGTGGAAGA
AATGAATTACATGGCTGCCGAGGGCGAGGGCGAGGTGTGTGTGAAAGGGCCAAATGTATTTCAGGGCTACTTGAA
GGACCCAGCGAAAACAGCAGAAGCTTTGGACAAAGACGGCTGGTTACACACAGGGGACATTGGAAAATGGTTACC
AAATGGCACCTTGAAAATTATCGACCGGAAAAAGCACATATTTAAGCTGGCACAAGGAGAATACATAGCCCCTGA
AAAGATTGAAAATATCTACATGCGAAGTGAGCCTGTTGCTCAGGTGTTTGTCCACGGAGAAAGCCTGCAGGCATT
TCTCATTGCAATTGTGGTACCAGATGTTGAGACATTATGTTCCTGGGCCCAAAAGAGAGGATTTGAAGGGTCGTT
TGAGGAACTGTGCAGAAATAAGGATGTCAAAAAAGCTATCCTCGAAGATATGGTGAGACTTGGGAAGGATTCTGG
TCTGAAACCATTTGAACAGGTCAAAGGCATCACATTGCACCCTGAATTATTTTCTATCGACAATGGCCTTCTGAC
TCCAACAATGAAGGCGAAAAGGCCAGAGCTGCGGAACTATTTCAGGTCGCAGATAGATGACCTCTATTCCACTAT
CAAGGTTTAGTGTGAAGAAGAAAGCTCAGAGGAAATGGCACAGTTCCACAATCTCTTCTCCTGCTGATGGCCTTC
ATGTTGTTAATTTTGAATACAGCAAGTGTAGGGAAGGAAGCGTTCGTGTTTGACTTGTCCATTCGGGGTTCTTCT
CATAGGAATGCTAGAGGAAACAGAACACCGCCTTACAGTCACCTCATGTTGCAGACCATGTTTATGGTAATACAC
ACTTTCCAAAATGAGCCTTAAAAATTGTAAAGGGGATACTATAAATGTGCTAAGTTATTTGAGACTTCCTCAGTT
TAAAAAGTGGGTTTTAAATCTTCTGTCTCCCTGCTTTTCTAATCAAGGGGTTAGGACTTTGCTATCTCTGAGATG
TCTGCTACTTGCTGCAAATTCTGCAGCTGTCTGCTGCTCTAAAGAGTACAGTGCACTAGAGGGAAGTGTTCCCTT
TAAAAATAAGAACAACTGTCCTGGCTGGAGAATCTCACAAGCGGACCAGAGATCTTTTTAAATCCCTGCTACTGT
CCCTTCTCACAGGCATTCACAGAACCCTTCTGATTCGTAAGGGTTACGAAACTCATGTTCTTCTCCAGTCCCCTG
TGGTTTCTGTTGGAGCATAAGGTTTCCAGTAAGCGGGAGGGCAGATCCAACTCAGAACCATGCAGATAAGGAGCC
TCTGGCAAATGGGTGCTCATCAGAACGCGTGGATTCTCTTTCATGGCAGAATGCTCTTGGACTCGGTTCTCCAGG
CCTGATTCCCCGACTCCATCCTTTTTCAGGGGTTATTTAAAAATCTGCCTTAGATTCTATAGTGAAGACAAGCAT
TTCAAGAAAGAGTTACCTGGATCAGCCATGCTCAGCTGTGACGCCTGAATAACTGTCTACTTTATCTTCACTGAA
CCACTCACTCTGTGTAAAGGCCAACAGATTTTAATGTGGTTTTCATATCAAAGATCATGTTGGGATTAACTTG
CCTTTTTCCCCAAAAAATAAACTCTCAGGCAAGCATTTCTTTAAAGCTATTAAGGGAGTATATACTTGAGTACTT
ATTGAAATGGACAGTAATAAGCAAATGTTCTTATAATGCTACCTGATTTCTATGAAATGTGTTTGACAAGCCAAA
ATTCTAGGATGTAGAAATCTGGAAAGTTCATTTCCTGGGATTCACTTCTCCAGGGATTTTTTAAAGTTAATTTGG
GAAATTAACAGCAGTTCACTTTATTGTGAGTCTTTGCCACATTTGACTGAATTGAGCTGTCATTGTACATTTAA
AGCAGCTGTTTTGGGGTCTGTGAGAGTACATGTATTATATACAAGCACAACAGGGCTTGCACTAAAGAATTGTCA
TTGTAATAACACTACTTGGTAGCCTAACTTCATATATGTATTCTTAATTGCACAAAAAGTCAATAATTTGTCACC
TTGGGGTTTTGAATGTTTGCTTTAAGTGTTGGCTATTTCTATGTTTTATAAACCAAAACAAAATTTCCAAAAACA
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FIGURE 409B

ATGAAGGAAACCAAAATAAATATTTCTGCATTTCG

FIGURE 410

MQAHELFRYFRMPELVDFRQYVRTLPTNTLMGFGAFAALTTFWYATRPKPLKPPCDLSMQSVEVAGSGGARRSAL
LDSDEPLVYFYDDVTTLYEGFQRGIQVSNNGPCLGSRKPDQPYEWLSYKQVAELSECIGSALIQKGFKTAPDQFI
GIFAQNRPEWVIIEQGCFAYSMVIVPLYDTLGNEAITYIVNKAELSLVFVDKPEKAKLLLEGVENKLIPGLKIIV
VMDAYGSELVERGQRCGVEVTSMKAMEDLGRANRRKPKPPAPEDLAVICFTSGTTGNPKGAMVTHRNIVSDCSAF
VKATENTVNPCPDDTLISFLPLAHMFERVVECVMLCHGAKIGFFQGDIRLLMDDLKVLQPTVFPVVPRLLNRMFD
RIFGQANTTLKRWLLDFASKRKEAELRSGIIRNNSLWDRLIFHKVQSSLGGRVRLMVTGAAPVSATVLTFLRAAL
GCQFYEGYGQTECTAGCCLTMPGDWTAGHVGAPMPCNLIKLVDVEEMNYMAAEGEGEVCVKGPNVFQGYLKDPAK
TAEALDKDGWLHTGDIGKWLPNGTLKIIDRKKHIFKLAQGEYIAPEKIENIYMRSEPVAQVFVHGESLQAFLIAI
VVPDVETLCSWAQKRGFEGSFEELCRNKDVKKAILEDMVRLGKDSGLKPFEQVKGITLHPELFSIDNGLLTPTMK
AKRPELRNYFRSQIDDLYSTIKV

FIGURE 411

GAGAATGGCTCAACTCTCCAAATAGAGAGAATTTCTATCAGTTGCAAGTACGAAAATTTCCTGCCGATTATATAA
AATACTGGGAGTTTGCAGTTTATCTGGAAGAATGTGAACTGGCTAAACAGCTTTATCCAAAGGAAAACGATTTGG
TGTTTTTAGCTCCTGAGAGAATAAATGAAGAGAAGAAAGATACAGAGAGAAATGACATACAAGATCTCCACGAAT
ATCATTCTGGTTATGTTCATAAATTTCGCCGCACGTCAGTCATGCGTAATGGGAAAACTGAGTGTTACCTTTCCA
TCCAGACTCAAGAGAACTTTCCGGCCAATTTAAACGAACTTGTGAATTGTATTGTAATCAGTTCTCTGGTAACTA
CACAAAGGAAGTTGAAAGCCATGTCTCTGTTGGGTAGTCGGAACCAACTGGCTAGAGCTGTTCTGAATCCAAACC
CTATGGACTTCTGTACAAAGATTTACTGACTACAACATCTGAGAGAATTATTGCGTACTTAAGAGATTTCAATG
AAGATCAAAAGAAAGCAATAGAAACTGCATATGCTATGGTGAAACACTCACCATCAGTTGCCAAAATCTGCTTGA
TTCATGGACCACCTGGAACAGGAAAATCAAAAACTATTGTTGGCCTCCTCTATCGTCTACTGACAGAGAACCAGA
GGAAGGGGCATTCAGACGAAAACTCCAATGCCAAAATCAAACAAAACCGTGTCCTCGTGTGTGCACCTTCCAATG
CAGCTGTTGATGAACTCATGAAAAAAATTATCCTTGAATTCAAAGAAAAATGTAAAGACAAGAAGAATCCTTTAG
GAAACTGTGGAGATATAAATTTAGTACGACTGGGTCCAGAAAAGTCTATTAATAGTGAGGTTCTAAAGTTCAGTT
TGGACAGCCAAGTAAACCACAGAATGAAAAAAGAGTTACCTTCTCATGTTCAGGCGATGCATAAAAGAAAGGAAT
TTCTAGATTATCAGCTGGATGAGCTTTCCCGGCAGCGAGCTCTATGCCGAGGTGGACGGGAAATACAGAGGCAAG
AATTAGATGAAACATTTCCAAAGTTTCTAAGGAAAGGCAGGAACTTGCTTCTAAAATTAAAGAGGTTCAAGGAC
GCCCACAGAAAACACAGAGTATCATCATCTTAGAGTCCCATATCATCTGCTGCACGTTGAGCACAAGTGGTGGTT
TACTACTTGAGTCTGCTTTCCGTGGGCAAGGGGGTGTCCCCTTCAGCTGTGTCATTGTTGATGAGGCTGGACAGT
CTTGTGAAATTGAGACTCTTACTCCACTCATCCATCGCTGCAATAAGCTCATCCTAGTAGGAGATCCTAAGCAGC
TCCCTCCGACAGTCATCTCTATGAAAGCACAGGAGTATGGCTACGACCAGTCAATGATGGCTCGCTTCTGCAGAC
TGCTGGAAGAGAATGTAGAACACAACATGATCAGCAGGCTGCCCATTCTACAGCTCACTGTTCAGTACAGGATGC
ATCCAGACATATGCCTCTTCCCTTCTAATTATGTTTATAACAGAAACTTAAAAACAAATAGACAGACAGAAGCCA
TTCGATGTTCATCAGATTGGCCATTTCAGCCATACCTTGTGTTTGATGTTGGAGATGGTTCAGAAAGACGGGATA
ATGACTCATATATAAATGTTCAAGAAATAAAACTGGTGATGGAAATAATTAAGCTTATTAAAGACAAAAGAAAGG
ATGTTAGTTTTCGAAACATTGGCATAATAACTCATTACAAGGCCCAGAAGACGATGATTCAGAAGGATTTGGACA
AAGAGTTCGATAGAAAAGGACCAGCAGAAGTAGACACTGTGGATGCATTCCAGGGTCGGCAGAAGGATTGTGTTA
TTGTTACGTGTGTCAGAGCAAATAGCATCCAAGGTTCAATTGGATTCCTGGCAAGTTTGCAGAGATTGAATGTCA
CCATCACACGAGCCAAGTACAGCCTCTTCATCCTCGGACATTTGAGGACCCTGATGGAAAACCAGCATTGGAATC
AGCTGATTCAGGATGCTCAGAAGCGTGGTGCCATTATTAAGACCTGTGACAAAAACTATAGACATGATGCAGTGA
AGATTCTGAAACTCAAGCCTGTGCTGCAGAGAAGTCTCACTCACCCTCCTACCATAGCCCCAGAGGGGTCCAGAC
CCCAGGGTGGTTTGCCCAGCAGCAAGCTAGACAGTGGATTTGCCAAGACATCTGTTGCTGCTTCTCTATACCACA
CACCCTCTGACTCCAAGGAAATTACTCTTACTGTTACTTCAAAGGACCCTGAAAGACCTCCTGTTCATGACCAAC
TTCAGGACCCACGACTGCTGAAGAGGATGGGCATTGAGGTCAAAGGAGGAATATTCCTTTGGGATCCACAACCCT
CGAGCCCCCAGCATCCTGGAGCAACACCTCCTACGGGCGAGCCGGGCTTCCCTGTCGTTCACCAGGACCTGAGCC
ATATACAGCAGCCCGCTGCTGTAGTGGCTGCTCTGAGCAGCCACAAACCTCCCGTGCGGGGCGAACCTCCAGCTG
CCAGTCCCGAGGCTTCCACGTGTCAGAGCAAATGTGATGACCCGGAAGAGGAGCTCTGTCACAGGAGAGAGGCCA
GGGCTTTCAGTGAAGGGGAGCAGGAGAAGTGTGGTTCCGAGACCCATCACACCAGGAGGAACTCTAGGTGGGACA
AGAGGACACTGGAGCAGGAGGACAGCAGTTCCAAGAAAAGAAAGCTTTTATAGGAAAGCCCAGTGACATGGGCCA
GCAGCCACAGCATATTGTAAACTGAAGATGACCAGCTCGTGGGACCATCTAGATAAGCTTGTTTTTTGTAAGGAG
TTTGTGTGCTGTTGGAAAACATGGAAAATGCATCCTTAACACCTGAGCCTCTGGTCATCTTCAGTATTTTCTGTC
ATTTGCAAAGCTTTCAGAGGGCATTGTGTATCCGTAATAATGTCCTTGAAGTCAGAGACTGGAAATGTTGATCT
CTTAGTCTTCTATAGACAAGGAGGTCAGACTGGAGTGAATGTTGTAAAAGTTGAAATGTATATTTGTATAGCAAA
TAACAAAATCCTTTTAAAATTT

FIGURE 412

MRNGKTECYLSIQTQENFPANLNELVNCIVISSLVTTQRKLKAMSLLGSRNQLARAVLNPNPMDFCTKDLLTTTS
ERIIAYLRDFNEDQKKAIETAYAMVKHSPSVAKICLIHGPPGTGKSKTIVGLLYRLLTENQRKGHSDENSNAKIK
QNRVLVCAPSNAAVDELMKKIILEFKEKCKDKKNPLGNCGDINLVRLGPEKSINSEVLKFSLDSQVNHRMKKELP
SHVQAMHKRKEFLDYQLDELSRQRALCRGGREIQRQELDENISKVSKERQELASKIKEVQGRPQKTQSIIILESH
IICCTLSTSGGLLLESAFRGQGGVPFSCVIVDEAGQSCEIETLTPLIHRCNKLILVGDPKQLPPTVISMKAQEYG
YDQSMMARFCRLLEENVEHNMISRLPILQLTVQYRMHPDICLFPSNYVYNRNLKTNRQTEAIRCSSDWPFQPYLV
FDVGDGSERRDNDSYINVQEIKLVMEIIKLIKDKRKDVSFRNIGIITHYKAQKTMIQKDLDKEFDRKGPAEVDTV
DAFQGRQKDCVIVTCVRANSIQGSIGFLASLQRLNVTITRAKYSLFILGHLRTLMENQHWNQLIQDAQKRGAIIK
TCDKNYRHDAVKILKLKPVLQRSLTHPPTIAPEGSRPQGGLPSSKLDSGFAKTSVAASLYHTPSDSKEITLTVTS
KDPERPPVHDQLQDPRLLKRMGIEVKGGIFLWDPQPSSPQHPGATPPTGEPGFPVVHQDLSHIQQPAAVVAALSS
HKPPVRGEPPAASPEASTCQSKCDDPEEELCHRREARAFSEGEQEKCGSETHHTRRNSRWDKRTLEQEDSSSKKR
KLL

FIGURE 413A

GCGGCGCTGGGTCGGTGGCGGAGGCTGAGGAGAAGGAGGAGCGGGCCGTGGAGGCTTCGCCGCCTAGGTACTGCT
ATAACCAGAATTTGGTAGAAAAAGGATTTACTTGTTGGGGCCCTCTTGATAAAAAGAG**ATG**TGGGGGGATTCTCG
ACCTGCTAACAGAACTGGACCTTTTCGTGGGAGCCAAGAAGAAAGGTTTGCTCCCGGGTGGAACAGGGATTATCC
TCCTCCTCCCCTTAAGAGTCATGCTCAAGAGAGACACTCTGGCAACTTTCCTGGCAGAGATTCACTTCCCTTTGA
TTTCCAGGGGCATTCGGGGCCTCCTTTTGCAAATGTAGAGGAGCATTCTTTCAGCTATGGAGCTAGAGACGGACC
GCATGGTGACTATCGAGGAGGGGAGGGACCTGGACATGATTTCAGGGGGGGAGATTTTTCGTCTTCTGATTTCCA
GAGCAGAGATTCATCACAGTTGGACTTCAGGGGTAGGGACATACATTCTGGGGATTTTCGGGATAGAGAAGGACC
ACCTATGGACTATAGGGGTGGAGATGGTACTTCTATGGATTATAGAGGTAGGGAGGCACCTCATATGAACTACAG
AGACAGGGATGCTCACGCTGTTGACTTCAGAGGTAGGGATGCTCCTCCATCTGACTTCAGGGGCCGGGGCACTTA
TGATTTAGATTTTAGAGGCCGGGATGGATCCCATGCAGATTTTAGGGGAAGGGATTTATCAGATTTGGATTTTAG
GGCCAGAGAACAGTCCCGTTCTGATTTTAGGAATAGAGATGTATCTGATTGGACTTTAGAGACAAAGACGGAAC
ACAAGTAGACTTTAGAGGCCGAGGTTCAGGTACTACTGATCTAGACTTTAGGGACAGGGATACGCCACATTCAGA
TTTCAGAGGTAGACACCGATCTAGGACTGATCAGGATTTTAGGGGCAGAGAGATGGGATCTTGTATGGAATTTAA
AGATAGGGAGATGCCCCCTGTGGATCCAAATATTTTGGATTACATTCAGCCCTCTACACAAGATAGAGAACATTC
TGGTATGAATGTGAACAGGAGAGAAGAATCCACACATGACCATACGATAGAAAGGCCTGCTTTTGGCATTCAGAA
GGGAGAATTTGAGCATTCAGAAACAAGAGAAGGAGAAACACAAGGTGTAGCCTTTGAACATGAGTCTCCAGCAGA
CTTTCAGAACAGCCAAAGTCCAGTTCAAGACCAAGATAAGTCACAGCTTTCTGGACGTGAAGAGCAGAGTTCAGA
TGCTGGTCTGTTTAAAGAAGAAGGCGGTCTGGACTTTCTTGGGCGGCAAGACACCGATTACAGAAGCATGGAGTA
CCGTGATGTGGATCATAGGCTGCCAGGAAGCCAGATGTTTGGCTATGGCCAGAGCAAGTCTTTTCCAGAGGGCAA
AACTGCCCGAGATGCCCAACGGGACCTTCAGGATCAAGATTATAGGACCGGCCCAAGTGAGGAGAAACCCAGCAG
GCTTATTCGATTAAGTGGGGTACCTGAAGATGCCACAAAGAAGAGATTCTTAATGCTTTTCGGACTCCTGATGG
CATGCCTGTAAAGAACTTGCAGTTGAAGGAGTATAACACAGGTTACGACTATGGCTATGTCTGCGTGGAGTTTTC
ACTCTTGGAAGATGCCATCGGATGCATGGAGGCCAACCAGGGAACTCTAATGATCCAGGACAAAGAAGTTACCCT
GGAGTATGTATCAAGCCTGGATTTTTGGTACTGCAAACGATGTAAGGCAAACATTGGTGGGCACCGATCTTCCTG
TTCATTCTGCAAGAACCCAAGAGAAGTGACAGAGGCCAAGCAAGAATTAATAACCTACCCTCAGCCTCAGAAAAC
ATCCATACCAGCACCATTGGAAAAACAGCCCAACCAGCCCCTAAGACCAGCTGATAAGGAACCTGAACCCAGGAA
GAGGGAAGAAGGCCAAGAGTCACGCTTAGGACATCAAAAGAGAGAAGCAGAAAGGTATCTGCCTCCTTCTCGAAG
GGAAGGGCCAACTTTCCGAAGAGACCGAGAGAGGGAGTCATGGTCTGGAGAGACACGCCAGGATGGAGAGAGCAA
AACTATCATGCTAAAGCGTATCTATCGTTCCACACCACCTGAGGTGATAGTGGAAGTGCTGGAGCCCTATGTCCG
CCTTACTACTGCCAACGTCCGTATCATCAAGAACAGAACAGGCCCTATGGGGCATACCTATGGCTTTATTGACCT
CGACTCCCATGCGGAAGCTCTTCGTGTGGTGAAGATCTTACAGAACCTTGATCCGCCATTTAGCATTGATGGGAA
GATGGTAGCTGTAAACCTGGCCACTGGAAAACGAAGAAATGATTCTGGGGACCATTCTGACCACATGCATTACTA
TCAGGGTAAAAAATATTTCCGAGATAGGAGGGGAGGTGGCAGAAATTCAGACTGGTCTTCAGATACAAATCGACA
AGGACAACAGTCATCATCTGACTGCTACATATATGATTCTGCTACTGGCTACTATTATGACCCCTTGGCAGGAAC
TTATTATGACCCCAATACCCAGCAAGAAGTCTATGTGCCCCAGGATCCTGGATTACCTGAGGAAGAAGAGATCAA
GGAAAAAAAACCCACCAGTCAAGGAAAGTCAAGTAGCAAGAAGGAAATGTCTAAAAGAGATGGCAAGGAGAAAAA
AGACAGAGGAGTGACGAGGTTTCAGGAAAATGCCAGTGAAGGGAAGGCCCCTGCAGAAGACGTCTTTAAGAAGCC
CCTGCCTCCTACTGTGAAGAAGGAAGAGAGTCCCCCTCCACCTAAAGTGGTAAACCCACTGATCGGCCTCTTGGG
TGAATATGGAGGAGACAGTGACTATGAGGAGGAAGAAGAGGAGGAACAGACCCCTCCCCCACAGCCCCGCACAGC
ACAGCCCCAGAAGCGAGAGGAGCAAACCAAGAAGGAGAATGAAGAAGACAAACTCACTGACTGGAATAAACTGGC
TTGTCTGCTTTGCAGAAGGCAGTTTCCCAATAAAGAAGTTCTGATCAAACACCAGCAGCTGTCAGACCTGCACAA
GCAAAACCTGGAAATCCACCGGAAGATAAAACAGTCTGAGCAGGAGCTAGCCTATCTGGAAAGGAGAGAACGAGA
GGGAAAGTTTAAAGGAAGAGGAAATGATCGCAGGGAAAAGCTCCAGTCTTTTGACTCTCCAGAAAGGAAACGGAT
TAAGTACTCCAGGGAAACTGACAGTGATCGTAAACTTGTTGATAAGAAGATATCGACACTAGCAGCAAAGGAGG
CTGTGTCCAACAGGCTACTGGCTGGAGGAAAGGGACAGGCCTGGGATATGGCCATCCTGGATTGGCTTCATCAGA
GGAGGCTGAAGGCCGGATGAGGGGCCCCAGTGTTGGAGCCTCAGGAAGAACCAGCAAAAGACAGTCCAACGAGAC
TTATCGAGATGCTGTTCGAAGAGTCATGTTTGCTCGATATAAAGAACTCGAT**TAA**GAAAGGAGACAAGTTCCATG
GGATACAACCTCCCTCTTGTTTTGTTTGTCTCTCCTTTTCTTTTGTTACTGTTCTTGCTGCTAGAACTTTTTTAA

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FIGURE 413B

ATAAACTTTTTTTCAATGTGAAAAAAAAAAAAAAAAAAA

FIGURE 414

MWGDSRPANRTGPFRGSQEERFAPGWNRDYPPPPLKSHAQERHSGNFPGRDSLPFDFQGHSGPPFANVEEHSFSY
GARDGPHGDYRGGEGPGHDFRGGDFSSSDFQSRDSSQLDFRGRDIHSGDFRDREGPPMDYRGGDGTSMDYRGREA
PHMNYRDRDAHAVDFRGRDAPPSDFRGRGTYDLDFRGRDGSHADFRGRDLSDLDFRAREQSRSDFRNRDVSDLDF
RDKDGTQVDFRGRGSGTTDLDFRDRDTPHSDFRGRHRSRTDQDFRGREMGSCMEFKDREMPPVDPNILDYIQPST
QDREHSGMNVNRREESTHDHTIERPAFGIQKGEFEHSETREGETQGVAFEHESPADFQNSQSPVQDQDKSQLSGR
EEQSSDAGLFKEEGGLDFLGRQDTDYRSMEYRDVDHRLPGSQMFGYGQSKSFPEGKTARDAQRDLQDQDYRTGPS
EEKPSRLIRLSGVPEDATKEEILNAFRTPDGMPVKNLQLKEYNTGYDYGYVCVEFSLLEDAIGCMEANQGTLMIQ
DKEVTLEYVSSLDFWYCKRCKANIGGHRSSCSFCKNPREVTEAKQELITYPQPQKTSIPAPLEKQPNQPLRPADK
EPEPRKREEGQESRLGHQKREAERYLPPSRREGPTFRRDRERESWSGETRQDGESKTIMLKRIYRSTPPEVIVEV
LEPYVRLTTANVRIIKNRTGPMGHTYGFIDLDSHAEALRVVKILQNLDPPFSIDGKMVAVNLATGKRRNDSGDHS
DHMHYYQGKKYFRDRRGGGRNSDWSSDTNRQGGQQSSSDCYIYDSATGYYYDPLAGTYYDPNTQQEVYVPQDPGLP
EEEEIKEKKPTSQGKSSSKKEMSKRDGKEKKDRGVTRFQENASEGKAPAEDVFKKPLPPTVKKEESPPPPKVVNP
LIGLLGEYGGDSDYEEEEEEEEQTPPPQPRTAQPQKREEQTKKENEEDKLTDWNKLACLLCRRQFPNKEVLIKHQQ
LSDLHKQNLEIHRKIKQSEQELAYLERREREGKFKGRGNDRREKLQSFDSPERKRIKYSRETDSDRKLVDKEDID
TSSKGGCVQQATGWRKGTGLGYGHPGLASSEEAEGRMRGPSVGASGRTSKRQSNETYRDAVRRVMFARYKELD

FIGURE 415A

GACAGCCTCTGGGTCCTCGGTCGGTACAGTCTCTGCACCTCGCGCCCCAGCAGGTAAACTAACATT**ATG**GATTTT
TCCAAGCTACCCAAAATACTCGATGAAGATAAAGAAAGCACATTTGGTTATGTGCATGGGGTCTCAGGACCTGTG
GTTACAGCCTGTGACATGGCGGGTGCAGCCATGTATGAGCTGGTGAGAGTGGGCCACAGCGAATTGGTTGGAGAG
ATTATTCGATTGGAGGGTGACATGGCTACTATTCAGGTGTATGAAGAAACTTCTGGTGTGTCTGTTGGAGATCCT
GTACTTCGCACTGGTAAACCCCTCTCTGTAGAGCTTGGTCCTGGCATTATGGGAGCCATTTTTGATGGTATTCAA
AGACCTTTGTCGGATATCAGCAGTCAGACCCAAAGCATCTACATCCCCAGAGGAGTAAACGTGTCTGCTCTTAGC
AGAGATATCAAATGGGACTTTACACCTTGCAAAAACCTACGGGTTGGTAGTCATATCACTGGCGGAGACATTTAT
GGAATTGTCAGTGAGAACTCGCTTATCAAACACAAATCATGTTACCCCCACGAAACAGAGGAACTGTAACTTAC
ATTGCTCCACCTGGGAATTATGATACCTCTGATGTTGTCTTGGAGCTTGAATTTGAAGGTGTAAAGGAGAAGTTC
ACCATGGTGCAAGTATGGCCTGTACGTCAAGTTCGACCTGTCACTGAGAAGCTGCCAGCCAATCATCCTCTGTTG
ACTGGCCAGAGAGTCCTTGATGCCCTTTTTCCGTGTGTCCAGGGAGGAACTACTGCTATCCCTGGAGCCTTTGGC
TGTGGAAAGACAGTGATATCACAGTCTCTATCCAAGTATTCTAACAGTGATGTAATCATCTATGTAGGATGTGGT
GAAAGAGGAAATGAGATGTCTGAAGTCCTCCGGGACTTCCCAGAGCTCACAATGGAGGTTGATGGTAAGGTAGAG
TCAATTATGAAGAGGACAGCTTTGGTAGCCAATACCTCCAATATGCCTGTTGCTGCTAGAGAAGCCTCTATTTAT
ACTGGAATCACACTGTCAGAGTACTTCCGTGACATGGGCTATCATGTCAGTATGATGGCTGACTCTACCTCTAGA
TGGGCTGAGGCCCTTAGAGAAATCTCTGGTCGTTAGCTGAAATGCCTGCAGATAGTGGATATCCAGCCTATCTT
GGTGCCCGTCTGGCCTCGTTTTATGAACGAGCAGGCAGGGTGAAATGTCTTGGAAATCCTGAAAGAGAAGGGAGT
GTCAGCATTGTAGGAGCAGTTTCTCCACCTGGTGGTGATTTTTCTGATCCAGTTACATCTGCCACTCTTGGTATC
GTTCAGGTGTTCTGGGGCTTAGATAAGAAACTAGCTCAACGTAAGCATTTCCCCTCTGTCAATTGGCTCATCAGC
TACAGCAAGTATATGCGTGCCTTGGATGAATACTATGACAAACACTTCACAGAGTTCGTTCCTCTGAGGACGAAA
GCTAAGGAAATTCTGCAGGAAGAAGAAGACCTGGCAGAAATTGTACAGCTTGTGGGAAAGGCTTCTTTGGCAGAA
ACAGATAAAATCACTCTGGAGGTAGCAAAACTTATCAAAGATGATTTCCTACAACAAATGGATATACTCCTTAT
GACAGGTTCTGCCCATTCTACAAGACAGTAGGGATGCTGTCCAACATGATTGCATTTATGATATGGCTCGTAGA
GCTGTTGAAACCACTGCCCAGAGTGACAATAAAATCACATGGTCCATTATTCGTGAGCACATGGGAGACATCCTC
TATAAACTTTCCTCCATGAAATTCAAGGATCCACTGAAAGATGGTGAGGCAAAGATCAAAAGCGACTATGCACAA
CTTCTTGAAGACATGCAGAATGCATTCCGTAGCCTTGAAGAT**TAG**AAGCCTTGAAGATTACAACTGTGATTTCCT
TTTCCTCAGCAAGCTCCTATGTGTATATTTTCCTGAATTTCTCATCTCAAACCCTTTGCTTCTTTATTGTGCAGC
TTTGAGACTAGTGCCTATGTGTGTTATTTGTTTCCCTGTTTTTTTGGTAGGTCTTATATAAAACAAACATTCCTT
TGTTCTAGTGTTGTGAAGGGCCTCCCTCTTCCTTTATCTGAAGTGGTGAATATAGTAAATATACATTCTGGTTAC
ACTACTGTAAACTTGTATGTAGGGTGATGACCCTCTTTGTCCTAGGTGTACCCTTTCCTCATCTCTATTAAATTG
TAAACAGGACTACTGCATGTACTCTCTTTGCAGTGAATTTGGAATGGAAGGCCAGGTTTCTATAACTTTTGAACA
GGTACTTTGTGAAATGACTCAATTTCTATTGTGGTAAGCTCATTGGCAGCTTAGCATTTTGCAAAGGAATTGCTT
TGCAGGAAATATTTAATTTTCAAAAACATAATGATTAATGTTCCAATTATGCATCACTTCCCCCAGTATAAATCA
GGAATGTTTGTGAGAAACCATTGGGAACTATACTCTTTTTATTTTTATTTTTATTTTTTTATTATTTTTTTTT
TGGGGACGGAGTGTCCCTCTTGTTGCCCAGGCTGGAGTGCAATGGCGTGATCTTGGCTCACTGCAGCCTTCGCCT
CCCGGGTTCAAGTGATTCTCCTGCCTCAGCCTCCCGAGTAGCTGGGATTACAGGCATGCTCCACCATGCCCAGCT
AATTTTGTATTTTTAGTAGAAACGGGGTTTCACCATATTGGTCAGGCTGGTCTCGAACTCCAGACCTCAGGTGAT
CCGCCCACCTCGGCCTCCCAAACTGCTGGGATTACAGGCGTGAGCCACCGCGCCTGGCCAGGGACTATACTCTTT
TTAAAATAGACATTTGTGGGGCTCACACAATATATGAAATAGTACCCTCTAAAAAAGAGAAAAAAAAATCAGGC
GGTCAAACTTAGAGCAACATTGTCTTATTAAAGCATAGTTTATTTCACTAGAAAAATTTAATATCAAGGACTAT
TACATACTTCATTACTAGGAAGTTCTTTTTAAAATGACACTTAAAACAATCACTGAAACTTGATCCACATCACA
CCCTGTTTATTTTCCTTAAACATCTTGGAAGCCTAAGCTTCTGAGAATCATGTGGCAAGTGTGATGGGCAGTAAA
ATACCAGAGAAGATGTTTAGTAGCAATTAAAGGCTGTTTGCACCTTTAAGGACCAGCTGGGCTGTAGTGATTCCT
GGGGCCAGAGTGGCATTATGTTTTTACAAAATAATGACATATGTCACATGTTTGCATGTTTGTTTGCTTGTTGAA
TTTTTGAACAGCCAGTTGACCAATCATAGAAAGTATTACTTTCTTTCATATGGTTTTTGGTTCACTGGCTTAAGA
GGTTTCTCAGAATATCTATGGCCACAGCAGCATACCAGTTTCCATCCTAATAGGAATGAAATTAATTTTGTATCT
ACTGATAACAGAATCTGGGTCACATGAAAAAAAATCATTTTATCCGTCTTTTAAGTATATGTTTAAAATAATAAT
TTATGTGTCTGCATATTGCAGAACAGCTCTGAGAGCAACAGTTTCCCATTAACTCTTTCTGACCAATAGTGCTGG

FIGURE 415B

CACCGTTGCTTCCTCTTTGGGAAGAGGAAAGGGTGTGTGAACATGGCTAACAATCTTCAAATACCCAAATTGTGA
TAGCATAAATAAAGTATTTATTTTATGCCTCAGTATATTATTATTTAATTTTTTAGGTAATGCCTATCTCTTGGT
CTATTAAGGAAAGAAGCAATCAGTAGAGAATTCAGGATAGTTTTGTTTAAATTCTTGCAGATTACATGTTTTTAC
AGTGGCCTGCTATTGAGGAAAGGTATTCTTCTATACAACTTGTTTTAACCTTTGAGAACATTGACAGAAATTATG
CAATGGTTTGTTGAGATACGGACTTGATGGTGCTGTTAATCAGTTTGCTTCCAAAGTGGCCTACTCAAGAGGCC
CTAAGACTGGTAGAAATTAAAAGGATTTCAAAAACTTTCTATTCCTTTCTTAAACCTACCAGCAAACTAGGATTG
TGATAGCAATGAATGGTATGATGAAGAAAGTTTGACCAAATTTGTTTTTTTGTTGTTGTTGTTTTGAATTTG
AAATCATTCTTATTCCCTTTAAGAATGTTTATGTATGAGTGTGAAGATGCTAGCGAACCTATGCTCAGATATTCA
TCGTAAGTCTCCCTTCACCTGTTACAGAGTTTCAGATCGGTCACTGATAGTATGTATTTCTTTAGTAAGAATGTG
TTAAAATTACAATGATCTTTTAAAAAGATGATGCAGTTCTGTATTTATTGTGCTGTGTCTGGTCCTAAGTGGAGC
CAATTAAACAAGTTTCATATGTATTTTTCCAGTGTTGAATCTCACACACTGTACTTTGAAAATTTCCTTCCATCC
TGAATAACGAATAGAAGAGGCCATATATATTGCCTCCTTATCCTTGAGATTTCACTACCTTTATGTTAAAAGTTG
TGTATAATTGTTAAAATCTGTGAAGAATAAAAAGTGGATTTAAATTAAAAAAAAAAAAAAAAAAAAA

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FIGURE 416

MDFSKLPKILDEDKESTFGYVHGVSGPVVTACDMAGAAMYELVRVGHSELVGEIIRLEGDMATIQVYEETSGVSV
GDPVLRTGKPLSVELGPGIMGAIFDGIQRPLSDISSQTQSIYIPRGVNVSALSRDIKWDFTPCKNLRVGSHITGG
DIYGIVSENSLIKHKIMLPPRNRGTVTYIAPPGNYDTSDVVLELEFEGVKEKFTMVQVWPVRQVRPVTEKLPANH
PLLTGQRVLDALFPCVQGGTTAIPGAFGCGKTVISQSLSKYSNSDVIIYVGCGERGNEMSEVLRDFPELTMEVDG
KVESIMKRTALVANTSNMPVAAREASIYTGITLSEYFRDMGYHVSMMADSTSRWAEALREISGRLAEMPADSGYP
AYLGARLASFYERAGRVKCLGNPEREGSVSIVGAVSPPGGDFSDPVTSATLGIVQVFWGLDKKLAQRKHFPSVNW
LISYSKYMRALDEYYDKHFTEFVPLRTKAKEILQEEEDLAEIVQLVGKASLAETDKITLEVAKLIKDDFLQQNGY
TPYDRFCPFYKTVGMLSNMIAFYDMARRAVETTAQSDNKITWSIIREHMGDILYKLSSMKFKDPLKDGEAKIKSD
YAQLLEDMQNAFRSLED

FIGURE 417

CACGTCGGCTGCTGGGAAGATCTGGATTCTCGTTTCAGGTCACCATCAGAAAAGCTAAGTTTGCTGTATAGTGAG
GATCAGGAGATCTGATCCTGATTGCAGAACCTTCCCTGATTACAGAATCTTGGATGATTTCACAAAAGTTCATCT
TCATTGCAGATACCTGCCTTTCTTTCTAGGTTGTATCTCCCACTTCACCCTTCTAGACCATCCCAGAAGATCTAT
AAGATTTCATCTGGGAAATCACTAGGAGTTCTTGGAAGGGAAAGAAGGAAGATTGTTGGTTGGAATAAAAACAGG
GTTGA**ATG**AGTTCCAGAAAGCAGGGTTCTCAACCTCGTGGACAGCAATCTGCAGAAGAAGAGAACTTCAAAAAAC
CAACTAGAAGCAACATGCAGAGAAGTAAAATGAGAGGGGCCTCCTCAGGAAAGAAGACAGCTGGTCCACAGCAGA
AAAATCTTGAACCAGCTCTCCCAGGAAGATGGGGTGGTCGCTCTGCAGAGAACCCCCCTTCAGGATCCGTGAGGA
AGACCAGAAAGAACAAGCAGAAGACTCCTGGAAACGGAGATGGTGGCAGTACCAGCGAAGCACCTCAGCCCCCTC
GGAAGAAAAGGGCCCGGGCAGACCCCACTGTTGAAAGTGAGGAGGCGTTTAAGAATAGAATGGAGGTTAAAGTGA
AGATTCCTGAAGAATTAAAACCATGGCTTGTTGAGGACTGGGACTTAGTTACCAGGCAGAAGCAGCTGTTTCAAC
TCCCTGCCAAGAAAAATGTAGATGCAATTCTGGAGGAGTATGCAAATTGCAAGAAATCGCAGGGAAATGTTGATA
ATAAGGAATATGCGGTTAATGAAGTTGTGGCAGGAATAAAAGAATATTTCAATGTGATGTTGGGCACTCAGCTGC
TCTACAAATTTGAGAGGCCCCAGTATGCTGAAATCCTCTTGGCTCACCCTGATGCTCCAATGTCCCAGGTTTATG
GAGCACCACACCTACTGAGATTATTTGTAAGAATTGGAGCAATGTTGGCCTATACGCCCCTTGATGAGAAAGCC
TTGCATTATTGTTGGGCTATTTGCATGATTTCCTAAAATATCTGGCAAAGAATTCTGCATCTCTCTTTACTGCCA
GTGATTACAAAGTGGCTTCTGCTGAGTACCACCGCAAAGCCCTG**TGA**GCGTCTACAGACAGCTCACCATTTTTGT
CCTGTATCTGTAAACACTTTTTGTTCTTAGTCTTTTTCTTGTAAAATTGATGTTCTTTAAAATCGTTAATGTATA
ACAGGGCTTATGTTTCAGTTTGTTTTCCGTTCTGTTTTAAACAGAAAATAAAAGGAGTGTAAGCTCCTTTTCTCA
TTTCAAAGTTGCTACCAGTGTATGCAGTAATTAGAACAAAGAAGAAACATTCAGTAGAACATTTTATTGCCTAGT
TGACAACATTGCTTGAATGCTGGTGGTTCCTATCCCTTTGACACTACACAATTTTCTAATATGTGTTAATGCTAT
GTGACAAAACGCCCTGATTCCTAGTGCCAAAGGTTCAACTTAATGTATATACCTGAAAACCCATGCATTTGTGCT
CTTTTTTTTTTATGGTGCTTGAAGTAAAACAGCCCATCCTCTGCAAGTCCATCTATGTTGTTCTTAGGCATTCT
ATCTTTGCTCAAATTGTTGAAGGATGGTGATTTGTTTCATGGTTTTTGTATTTGAGTCTAATGCACGTTCTAACA
TGATAGAGGCAATGCATTATTGTGTAGCCACGGTTTTCTGGAAAAGTTGATATTTTAGGAATTGTATTTCAGATC
TTAAATAAAATTTGTTTCTAAATTTC

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FIGURE 418

MSSRKQGSQPRGQQSAEEENFKKPTRSNMQRSKMRGASSGKKTAGPQQKNLEPALPGRWGGRSAENPPSGSVRKT
RKNKQKTPGNGDGGSTSEAPQPPRKKRARADPTVESEEAFKNRMEVKVKIPEELKPWLVEDWDLVTRQKQLFQLP
AKKNVDAILEEYANCKKSQGNVDNKEYAVNEVVAGIKEYFNVMLGTQLLYKFERPQYAEILLAHPDAPMSQVYGA
PHLLRLFVRIGAMLAYTPLDEKSLALLLGYLHDFLKYLAKNSASLFTASDYKVASAEYHRKAL

FIGURE 419

GCGACCGAACGCGGCGGTCGGCAGCGTTCGCGCGGGGGCCTGCGAAGCGCTGCTCGGGGCCGGCACTGCCCGCGG
GGAGGACGCGCCGCCGCCGCCACCCAGCGCCGCCGCCGCCGCCGCCTCCAGCCGGGCCGCCGCGCGTCCCGGGGG
CCGGCCCCGCGAGCGCAGGAGTAAACACCGCCGGAGTCTTGGAGCCGCTGCAGAAGGGAATAAAGAGAGATGCAG
GGATTTGTGAGGTTACGGCGCCCCAGCTGCAAGATGCACTAGCCGGCTGAACCCGGGATCGGCTGACTTGTTGGA
ACCGGAGTGCTCTGCACGGAGAGTGGTGGATGAGTTGAAGTTGCCTTCCCGGGGCTCATTTTCCACGCTGCCGAG
AGGAATCCGAGAGGCAAGGCAATCACTTCGTCTTGCCATTGATTGGGTATCGGGAGCTTTTTTTTTCTCCCCTCT
CTCTTTCTTTTCCTCCGTCTTGTTGCATGCAAGAAAATTACAGTCCGCTGCTCGCCCGCCCTGGGTGCGAGATAT
TCAGCCCCGCTCTCTCCCGTGCATTGTGCAACCCAAAGATGAAAGACCGAAGGGGAGAAAGTTAAAGAAATCGCC
CACATGCGCTGGATCAGTCCACGGCTTGGGGAAAGGCATCCAGAGAAGGTGGGAGCGGAGAGTTTGAAGTCTTTA
CAGGCGGGAAGATGGCGGACTGGAGCTGAAAGTGTTGATTGGGAAACTTGGGTGATTCTTGTGTTTATTTACAAT
CCTCTTGACCCAGGCAGGACAC**ATG**CAGGCCAAAAAACGCTATTTCATCCTGCTCTCAGCTGGCTCTTGTCTCGC
CCTTTTGTTTTATTTCGGAGGCTTGCAGTTTAGGGCATCGAGGAGCCACAGCCGGAGAGAAGAACACAGCGGTAG
GAATGGCTTGCACCACCCCAGTCCGGATCATTTCTGGCCCCGCTTCCCGGAGCCTCTGCGCCCCTTCGTTCCTTG
GGATCAATTGGAAAACGAGGATTCCAGCGTGCACATTTCCCCCCGGCAGAAGCGAGATGCCAACTCCAGCATCTA
CAAAGGCAAGAAGTGCCGCATGGAGTCCTGCTTCGATTTCACCCTTTGCAAGAAAAACGGCTTCAAAGTCTACGT
ATACCCACAGCAAAAAGGGGAGAAAATCGCCGAAAGTTACCAAAACATTCTAGCGGCCATCGAGGGCTCCAGGTT
CTACACCTCGGACCCCAGCCAGGCGTGCCTCTTTGTCCTGAGTCTGGATACTTTAGACAGAGACCAGTTGTCACC
TCAGTATGTGCACAATTTGAGATCCAAAGTGCAGAGTCTCCACTTGTGGAACAATGGTAGGAATCATTTAATTTT
TAATTTATATTCCGGCACTTGGCCTGACTACACCGAGGACGTGGGGTTTGACATCGGCCAGGCGATGCTGGCCAA
AGCCAGCATCAGTACTGAAAACTTCCGACCCAACTTTGATGTTTCTATTCCCCTCTTTTCTAAGGATCATCCCAG
GACAGGAGGGGAGAGGGGGTTTTTGAAGTTCAACACCATCCCTCCTCTCAGGAAGTACATGCTGGTATTCAAGGG
GAAGAGGTACCTGACAGGGATAGGATCAGACACCAGGAATGCCTTATATCACGTCCATAACGGGGAGGACGTTGT
GCTCCTCACCACCTGCAAGCATGGCAAAGACTGGCAAAAGCACAAGGATTCTCGCTGTGACAGAGACAACACCGA
GTATGAGAAGTATGATTATCGGGAAATGCTGCACAATGCCACTTTCTGTCTGGTTCCTCGTGGTCGCAGGCTTGG
GTCCTTCAGATTCCTGGAGGCTTTGCAGGCTGCCTGCGTCCCTGTGATGCTCAGCAATGGATGGGAGTTGCCATT
CTCTGAAGTGATTAATTGGAACCAAGCTGCCGTCATAGGCGATGAGAGATTGTTATTACAGATTCCTTCTACAAT
CAGGTCTATTCATCAGGATAAAATCCTAGCACTTAGACAGCAGACACAATTCTTGTGGGAGGCTTATTTTTCTTC
AGTTGAGAAGATTGTATTAACTACACTAGAGATTATTCAGGACAGAATATTCAAGCACATATCACGTAACAGTTT
AATATGGAACAAACATCCTGGAGGATTGTTCGTACTACCACAGTATTCATCTTATCTGGGAGATTTTCCTTACTA
CTATGCTAATTTAGGTTTAAAGCCCCCCTCCAAATTCACTGCAGTCATCCATGCGGTGACCCCCCTGGTCTCTCA
GTCCCAGCCAGTGTTGAAGCTTCTCGTGGCTGCAGCCAAGTCCCAGTACTGTGCCCAGATCATAGTTCTATGGAA
TTGTGACAAGCCCCTACCAGCCAAACACCGCTGGCCTGCCACTGCTGTGCCTGTCGTCGTCATTGAAGGAGAGAG
CAAGGTTATGAGCAGCCGTTTTCTGCCCTACGACAACATCATCACAGACGCCGTGCTCAGCCTTGACGAGGACAC
GGTGCTTTCAACAACAGAGGTGGATTTCGCCTTCACAGTGTGGCAGAGCTTCCCTGAGAGGATTGTGGGGTACCC
CGCGCGCAGCCACTTCTGGGATAACTCTAAGGAGCGGTGGGGATACACATCAAAGTGGACGAACGACTACTCCAT
GGTGTTGACAGGAGCTGCTATTTACCACAAATATTATCACTACCTATACTCCCATTACCTGCCAGCCAGCCTGAA
GAACATGGTGGACCAATTGGCCAATTGTGAGGACATTCTCATGAACTTCCTGGTGTCTGCTGTGACAAAATTGCC
TCCAATCAAAGTGACCCAGAAGAAGCAGTATAAGGAGACAATGATGGGACAGACTTCTCGGGCTTCCCGTTGGGC
TGACCCTGACCACTTTGCCCAGCGACAGAGCTGCATGAATACGTTTGCCAGCTGGTTTGGCTACATGCCGCTGAT
CCACTCTCAGATGAGGCTCGACCCCGTCCTCTTTAAAGACCAGGTCTCTATTTTGAGGAAGAAATACCGAGACAT
TGAGCGACTT**TGA**GGAATCCGGCTGAGTGGGGGAGGGGAAGCAAGAAGGGATGGGGGTCAAGCTGCTCTCTCTTC
CCAGTGCAGATCCACTCATCAGCAGAGCCAGATTGTGCCAACTATCCAAAAACTTAGATGAGCAGAATGACAAAA
AAAAAAAAGGCCAATGAGAACTCAACTCCTGGCTCCTGGGACTGCACCAGACTGCTCCAAACTCACCTCACTGGC
TTCTGTGTCCCAAGACTAGGTTGGTACAGTTTAATTATGGAACATTAAATAATTATTTTTGAAAAAAAAAAAAAA
AAAA

FIGURE 420

MQAKKRYFILLSAGSCLALLFYFGGLQFRASRSHSRREEHSGRNGLHHPSPDHFWPRFPEPLRPFVPWDQLENED
SSVHISPRQKRDANSSIYKGKKCRMESCFDFTLCKKNGFKVYVYPQQKGEKIAESYQNILAAIEGSRFYTSDPSQ
ACLFVLSLDTLDRDQLSPQYVHNLRSKVQSLHLWNNGRNHLIFNLYSGTWPDYTEDVGFDIGQAMLAKASISTEN
FRPNFDVSIPLFSKDHPRTGGERGFLKFNTIPPLRKYMLVFKGKRYLTGIGSDTRNALYHVHNGEDVVLLTTCKH
GKDWQKHKDSRCDRDNTEYEKYDYREMLHNATFCLVPRGRRLGSFRFLEALQAACVPVMLSNGWELPFSEVINWN
QAAVIGDERLLLQIPSTIRSIHQDKILALRQQTQFLWEAYFSSVEKIVLTTLEIIQDRIFKHISRNSLIWNKHPG
GLFVLPQYSSYLGDFPYYYANLGLKPPSKFTAVIHAVTPLVSQSQPVLKLLVAAAKSQYCAQIIVLWNCDKPLPA
KHRWPATAVPVVVIEGESKVMSSRFLPYDNIITDAVLSLDEDTVLSTTEVDFAFTVWQSFPERIVGYPARSHFWD
NSKERWGYTSKWTNDYSMVLTGAAIYHKYYHYLYSHYLPASLKNMVDQLANCEDILMNFLVSAVTKLPPIKVTQK
KQYKETMMGQTSRASRWADPDHFAQRQSCMNTFASWFGYMPLIHSQMRLDPVLFKDQVSILRKKYRDIERL

FIGURE 421A

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TGAGCTGCGAGGCCCGAGAGTCAGAACCTGGGGGAGAGGGATGGTCTCTGCACGGGGGGGGAGCCGGAGGAGCCGC
CGCCGCTGCCGACGCCACCGCCGCAGCCGCCGCCGCCGCCGCCCCGGCACCCGCCTCCCGGCGCTGACGGTCTCG
TACGAAGCCGGCGAGGGGGAGCCAGCAGCGGCGGTCGCCGGCACGCCGCCCAGCATGGTCCGGGAAACCAGGCAT
CTCTGGGTGGGCAACTTACCCGAGAACGTGCGGGAAGAGAAGATCATCGAGCATTTCAAACGATATGGCCGCGTG
GAAAGTGTCAAAATTCTTCCCAAGAGGGGATCTGAAGGAGGAGTGGCTGCCTTTGTGGATTTTGTGGACATCAAA
AGTGCACAGAAAGCTCACAACTCGGTCAACAAAATGGGTGACAGAGACCTACGCACGGATTATAATGAACCAGGC
ACCATCCCGAGTGCTGCTCGGGGATTGGATGATACAGTTTCCATAGCATCTCGTAGTAGAGAGGTTTCTGGGTTC
AGAGGAGGTGGTGGAGGGCCTGCTTATGGTCCCCCACCGTCACTTCATGCACGAGAAGGACGTTATGAGCGGAGA
CTTGATGGGGCTTCAGATAACAGGGAGCGTGCTTATGAACATAGTGCCTATGGACACCATGAACGGGGGACGGGA
GGATTTGATCGGACAAGACATTACGATCAGGATTACTATAGAGATCCTCGAGAGCGGACTTTACAACATGGGCTC
TATTACGCTTCTCGGAGTCGAAGTCCAAATCGCTTTGATGCTCATGACCCCCGATATGAACCTAGGGCTCGCGAG
CAGTTTACACTGCCCAGTGTGGTACACAGGGATATCTACAGGGATGATATTACCCGGGAGGTACGAGGCAGAAGG
CCAGAGCGGAATTACCAGCACAGCAGGAGTCGGTCACCACATTCATCCCAGTCTAGAAATCAGTCTCCTCAGAGA
CTGGCTAGCCAAGCATCTAGACCCACAAGGTCCCCTAGCGGCAGCGGCTCTAGAAGTAGATCCTCCAGTAGTGAT
TCAATCAGCAGCAGCAGTAGTACCAGCAGTGACAGCAGTGATTCCAGCAGTAGTTCAAGTGATGATTCTCCAGCT
CGATCAGTTCAGTCTGCAGCAGTCCCTGCACCCACTTCCCAGTTGCTTTCATCTCTGGAAAAAGATGAGCCCCGT
AAAAGTTTTGGCATCAAGGTCCAGAATCTTCCAGTACGCTCTACAGATACAAGCCTTAAAGATGGCCTTTTCCAT
GAATTTAAGAAATTTGGAAAAGTAACTTCAGTGCAGATACATGGAACTTCAGAAGAGAGGTATGGTCTGGTATTC
TTTCGGCAGCAAGAGGACCAAGAAAAAGCCTTGACTGCATCAAAAGGAAAACTTTTCTTTGGCATGCAGATTGAA
GTAACAGCATGGATAGGTCCAGAAACAGAAAGTGAAAATGAATTTCGCCCCTTGGATGAAAGGATAGATGAATTT
CACCCCAAAGCAACAAGAACTCTCTTTATTGGCAACCTTGAAAAAACCACTACTTACCATGACCTTCGCAACATC
TTCCAGCGCTTTGGAGAAATTGTGGATATTGACATTAAGAAAGTAAATGGAGTTCCTCAGTATGCGTTTCTGCAA
TACTGTGATATTGCTAGCGTTTGTAAAGCTATTAAGAAGATGGATGGGGAATATCTTGGAAATAATCGCCTCAAG
CTGGGTTTTGGAAAGAGCATGCCTACAAACTGCGTGTGGCTAGATGGGCTTTCTTCGAATGTGTCAGATCAGTAT
TTAACACGACATTTCTGCCGATATGGGCCTGTGGTAAAGGTGGTGTTTGACCGCTTAAAAGGCATGGCCCTGGTT
CTCTACAATGAAATTGAATATGCACAAGCAGCTGTAAAAGAGACCAAAGGGAGGAAAATCGGTGGGAATAAAATT
AAGGTGGATTTTGCAAATCGGGAAAGTCAGCTGGCTTTTTATCACTGCATGGAGAAATCTGGTCAAGACATCAGA
GACTTTTATGAAATGTTAGCCGAAAGAAGAGAGGAACGAAGGGCATCCTACGACTATAACCAAGATCGTACATAT
TATGAGAGTGTTCGAACTCCAGGCACTTATCCTGAGGATTCCAGGCGGGACTATCCAGCTCGAGGGAGAGAGTTT
TATTCAGAATGGGAAACTTACCAAGGAGACTACTATGAATCACGATACTACGATGATCCTCGGGAATACAGGGAT
TACAGGAATGATCCTTATGAACAAGATATTAGGGAATATAGTTACAGGCAAAGGGAACGAGAAAGAGAACGTGAA
AGATTTGAGTCTGACCGGGACAGAGACCATGAGAGGAGGCCGATTGAACGAAGTCAAAGTCCTGTTCACTTGCGA
CGTCCACAGAGTCCTGGAGCGTCTCCCTCTCAGGCAGAGAGGTTGCCGAGTGATTCTGAGAGGAGGCTTTACAGC
CGATCCTCAGACCGGAGTGGAAGCTGTAGCTCACTCTCCCCTCCAAGATATGAGAAACTGGACAAGTCTCGTTTG
GAGCGCTATACAAAAAATGAAAAGACAGATAAAGAACGAACTTTTGATCCGGAGAGAGTGGAGAGAGAGAGACGC
TTAATACGGAAGGAAAAAGTGGAAAAGGACAAAACTGACAAGCAGAAACGCAAAGGAAAGGTTCACTCCCCTAGT
TCTCAGTCTTCAGAAACGGACCAAGAAAATGAGCGAGAGCAAAGCCCTGAAAAGCCCAGGAGTTGTAATAAACTG
AGCAGAGAGAAAGCTGACAAAGAGGGAATAGCGAAAAACCGCCTGGAACTCATGCCTTGCGTGGTTTTGACTCGA
GTGAAAGAGAAAGAGGGAAAGGTCATTGACCACACTCCTGTGGAAAAGTTGAAAGCCAAGCTTGATAATGACACT
GTCAAATCTTCTGCCCTGGACCAGAAACTTCAGGTCTCTCAGACGGAGCCTGCAAAATCTGACTTGTCTAAACTG
GAATCAGTTAGAATGAAAGTACCAAAGGAAAGGGGCTTTCAAGCCATGTTGAAGTGGTGGAGAAGGAAGGCAGG
CTTAAAGCCAGGAAGCACCTCAAGCCTGAGCAGCCTGCAGATGGGGTAAGTGCTGTGGATCTGGAGAAGCTGGAA
GCCAGGAAAAGGCGCTTTGCAGATTCCAATTTAAAAGCAGAAAGCAAAACCAGAGGTCAAGAAAAGCAGTCCA
GAGATGGAGGATGCTCGCGTGCTTTCAAAAAAGCAGCCTGACGTGTCCTCTAGAGAGGTCATTCTGCTGAGGGAA
GGAGAGGCTGAAAGAAGCCTGTGAGGAAAGAAATTCTTAAAAGAGAATCTAAAAAAATCAAACTGGACAGACTT
AATACTGTTGCCAGCCCCAAAGACTGTCAGGAGCTTGCCAGTATTTCTGTTGGGTCTGGCTCAAGGCCCAGCTCA
GACCTACAAGCAAGACTGGGAGAACTAGCAGGTGAATCTGTGGAAAATCAAGAAGTCCAATCAAAAAAGCCCATT
CCCTCAAAACCACAGCTCAAACAGCTGCAGGTATTAGATGATCAAGGACCAGAGAGAGAAGACGTTAGGAAAAAC
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FIGURE 421B

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TATTGCAGTCTTCGTGATGAAACACCTGAACGTAAATCAGGCCAAGAGAAATCACATTCAGTAAATACTGAAGAA
AAAATTGGCATTGACATCGATCACACGCAGAGTTACCGAAAACAAATGGAACAGAGTCGTAGGAAACAGCAGATG
GAAATGGAAATAGCCAAGTCTGAGAAGTTTGGCAGTCCTAAAAAAGATGTAGATGAATATGAAAGACGTAGCCTC
GTTCACGAGGTAGGCAAACCCCCTCAAGATGTCACTGATGACTCTCCTCCTAGCAAAAAGAAAAGGATGGATCAT
GTCGATTTTGATATCTGCACCAAGCGAGAACGGAATTACAGAAGTTCACGCCAAATCAGCGAAGATTCTGAAAGG
ACTGGTGGTTCTCCCAGTGTCCGACATGGTTCCTTCCATGAAGATGAGGATCCCATAGGCTCCCCTAGGCTACTG
TCAGTAAAAGGGTCTCCTAAAGTAGATGAAAAAGTCCTCCCCTATTCTAACATAACAGTCAGGGAAGAGTCTTTA
AAATTTAATCCTTATGATTCTAGCAGGAGAGAACAGATGGCAGATATGGCCAAAATAAAACTATCTGTCTTGAAT
TCTGAAGATGAACTAAATCGTTGGGACTCTCAGATGAAACAGGATGCTGGCAGATTTGATGTGAGTTTCCCAAAC
AGCATAATTAAGAGAGATAGCCTTCGAAAAGGTCTGTACGAGATCTGGAACCTGGTGAGGTGCCTTCTGATTCT
GACGAAGATGGTGAACACAAATCCCACTCACCCAGAGCCTCTGCATTATATGAAAGTTCTCGATTGTCTTTTTTA
TTGAGGGACAGAGAAGACAAGCTACGTGAGCGAGATGAAAGACTCTCTAGTTCTTTAGAAAGGAACAAATTTTAC
TCTTTTGCATTGGATAAGACAATCACACCAGACACTAAAGCTTTGCTTGAAAGAGCTAAATCCCTCTCTTCATCT
CGTGAAGAAAATTGGTCTTTTCTTGATTGGGACTCCCGATTTGCAAATTTTCGAAACAACAAAGATAAAGAAAAG
GTTGACTCTGCTCCAAGACCTATTCCATCCTGGTACATGAAAAAGAAGAAAATTAGGACTGATTCAGAAGGGAAA
ATGGATGATAAGAAAGAGGACCATAAAGAAGAAGAGCAAGAGAGGCAGGAATTGTTTGCTTCTCGTTTTTTACAC
AGCTCAATCTTTGAACAAGATTCCAAGCGATTGCAGCATCTAGAGAGAAAAGAGGAAGATTCTGACTTCATTTCT
GGTAGGATCTATGGGAAGCAGACATCTGAGGGAGCAAACAGCACAACTGATTCCATTCAAGAACCAGTAGTTCTG
TTCCATAGCAGATTTATGGAGCTCACACGGATGCAACAGAAAGAAAAAGAAAAAGACCAGAAACCCAAAGAGGTT
GAGAAACAGGAAGATACAGAGAATCATCCCAAGACCCCAGAATCTGCTCCTGAGAATAAAGATTCAGAACTGAAA
ACTCCACCTTCCGTTGGGCCTCCAAGTGTCACAGTCGTAACTCTAGAATCAGCCCCATCAGCACTAGAGAAGACC
ACTGGTGACAAAACGGTAGAGGCGCCTTTGGTAACAGAAGAGAAGACTGTGGAGCCAGCTACCGTCTCAGAAGAA
GCAAAGCCTGCATCTGAACCTGCTCCTGCCCCTGTGGAACAGCTGGAACAAGTAGACCTGCCCCCAGGAGCAGAC
CCCGATAAAGAAGCTGCCATGATGCCTGCGGGTGTTGAGGAAGGTTCATCAGGTGACCAGCCGCCTTATCTGGAT
GCCAAGCCTCCAACTCCCGGGGCCTCGTTTTCCCAGGCAGAGAGCAACGTAGATCCAGAGCCTGACAGTACCCAG
CCACTTTCAAAACCAGCTCAGAAGTCTGAGGAAGCCAATGAGCCAAAGGCCGAAAAGCCAGACGCCACTGCAGAT
GCTGAGCCTGATGCAAACCAGAAAGCCGAAGCTGCTCCTGAGTCTCAGCCCCCAGCTTCTGAAGATTTAGAGGTT
GATCCTCCAGTTGCTGCAAAGGATAAAAAGCCAAACAAAAGCAAGCGTTCAAAGACCCCTGTTCAGGCAGCTGCA
GTGAGTATCGTGGAGAAGCCCGTCACAAGGAAGAGTGAGAGGATAGACCGGGAAAAACTCAAGCGGTCCAATTCT
CCTCGGGGGAGAAGCACAGAAGCTTTTGGAATTGAAGATGGAGGCAGAGAAGATTACAAGGACTGCTTCTAAAAAC
TCTGCTGCAGACCTTGAACATCCCGAACCAAGTTTGCCTCTCAGCCGAACAAGGCGCCGGAATGTAAGGAGCGTC
TATGCAACCATGGGTGACCATGAAAACCGCTCTCCTGTCAAAGAGCCCGTTGAGCAACCAAGAGTGACCAGAAAG
AGATTGGAGCGAGAGCTTCAGGAGGCTGCAGCGGTTCCCACCACCCCTCGGAGGGGAAGGCCTCCAAAGACACGC
CGGCGAGCCGATGAAGAGGAGGAGAACGAGGCCAAGGAACCTGCAGAAACACTCAAGCCACCTGAGGGATGGCGG
TCGCCAAGGTCCCAGAAAACTGCAGCTGGTGGTGGACCCCAAGGGAAAAAGGGAAAAAATGAACCGAAGGTGGAT
GCTACACGTCCTGAGGCCACCACTGAGGTGGGCCCCCAAATAGGCGTGAAAGAGAGCTCCATGGAACCCAAGGCT
GCTGAGGAGGAGGCAGGGAGTGAACAGAAACGTGACAGAAAGATGCTGGCACAGACAAAAACCCCCCTGAAACC
GCCCCTGTTGAAGTTGTAGAGAAAAACCGGCCCCTGAAAAAAACTCCAAATCAAAGAGAGGAAGATCTCGAAAC
TCCAGGTTAGCAGTGGACAAATCTGCAAGTCTGAAAAATGTGGATGCTGCTGTCAGTCCCAGGGGGGCTGCAGCA
CAGGCAGGGGAGAGGGAATCTGGGGTGGTGGCAGTCTCCCCTGAGAAAAGTGAGAGTCCCCAAAAGGAGGATGGT
TTATCATCCCAGTTGAAAAGTGATCCAGTTGATCCAGACAAGGAACCAGAGAAAGAAGACGTGTCTGCCTCTGGG
CCGTCCCCAGAAGCCACCCAGTTAGCCAAGCAGATGGAGCTGGAGCAGGCCGTGGAACACATCGCAAAGCTCGCT
GAGGCCTCTGCCTCTGCTGCCTATAAGGCAGATGCACCAGAGGGCCTTGCCCCAGAGGACAGGGACAAGCCTGCA
CACCAAGCAAGTGAAACAGAGCTGGCTGCGGCCATCGGCTCCATCATCAATGACATTTCTGGGGAGCCAGAAAAC
TTCCCAGCACCTCCACCTTATCCTGGAGAATCCCAGACAGATCTGCAACCCCCGCAGGTGCACAGGCGCTGCAG
CCTTCTGAGGAAGGAATGGAGACAGATGAGGCTGTATCTGGCATCCTGGAAACTGAGGCTGCTACAGAATCTTCT
AGGCCTCCAGTCAATGCTCCTGACCCCTCAGCCGGCCCAACAGATACCAAGGAAGCCAGAGGAAATAGCAGTGAA
ACCTCACACTCAGTGCCAGAAGCCAAAGGGTCTAAAGAAGTGGAAGTCACTCTTGTTCGGAAAGACAAAGGGCGC
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FIGURE 421C

CAGAAAACAACCCGATCACGCCGCAAGCGAAACACAAACAAGAAAGTGGTGGCTCCTGTAGAGAGCCATGTCCCT
GAATCCAACCAAGCTCAAGGTGAGAGTCCTGCTGCAAATGAGGGGACAACAGTACAGCACCCCGAAGCCCCACAG
GAAGAAAAGCAGAGTGAGAAACCCCATTCCACTCCTCCTCAGTCATGTACTTCTGACCTAAGCAAGATTCCCTCC
ACAGAGAATTCGTCCCAAGAAATCAGTGTTGAGGAAAGGACTCCAACCAAAGCATCTGTGCCCCAGACCTTCCC
CCACCTCCCCAGCCAGCACCGGTGGATGAGGAGCCTCAAGCCAGGTTCAGGGTGCATTCCATCATTGAAAGTGAC
CCGGTGACCCCACCCAGCGATCCAAGCATCCCCATACCCACACTGCCTTCTGTAACTGCAGCAAAGCTCTCACCT
CCTGTCGCCTCTGGGGGGATCCCACACCAGAGCCCCCCTACTAAGGTGACAGAGTGGATCACAAGGCAGGAGGAG
CCACGGGCTCAGTCTACTCCATCTCCAGCTCTTCCCCCAGACACAAAGGCCTCTGATGTTGACACCAGCTCCAGC
ACCCTGAGGAAGATTCTCATGGACCCCAAGTATGTGTCTGCCACAAGTGTCACTTCCACAAGTGTCACCACAGCC
ATTGCAGAGCCTGTCAGTGCTGCCCCTTGCCTACATGAGGCCCCGCCCCCGCCAGTTGACTCTAAAAAGCCTTTA
GAAGAAAAAACAGCACCTCCAGTGACAAACAACTCTGAGATACAAGCCTCGGAGGTGCTGGTAGCTGCTGACAAG
GAAAAGGTGGCTCCAGTCATTGCTCCCAAAATTACCTCTGTTATTAGCCGGATGCCTGTCAGCATTGACCTGGAA
AATTCACAGAAGATAACCTTGGCAAAACCAGCTCCTCAAACCCTCACTGGTCTGGTGAGCGCACTCACTGGCCTG
GTGAACGTCTCCCTGGTCCCGGTGAATGCCCTGAAAGGCCCCGTGAAGGGCTCAGTGACCACACTGAAAAGTTTG
GTGAGCACCCCTGCTGGGCCCGTGAACGTCCTGAAAGGGCCTGTGAATGTTCTTACGGGGCCAGTGAATGTTCTC
ACCACTCCAGTGAACGCCACGGTGGGCACAGTGAATGCCGCCCCAGGCACAGTCAATGCCGCTGCGAGTGCAGTG
AATGCCACAGCAAGTGCAGTGACCGTCACAGCGGGTGCGGTTACTGCTGCATCTGGTGGTGTAACGGCCACAACA
GGCACGGTGACAATGGCAGGGGCAGTGATTGCGCCGTCAACAAAGTGCAAACAGAGAGCGAGTGCTAATGAAAAC
AGTCGGTTCCACCCAGGGTCCATGCCTGTGATCGACGATCGTCCGGCAGACGCGGGCTCAGGGGCGGGGCTGCGT
GTGAACACTTCTGAAGGGGTTGTGCTCCTGAGTTACTCAGGGCAGAAGACCGAAGGCCCACAGCGGATCAGCGCC
AAGATCAGCCAGATCCCCCCGGCCAGTGCAATGGACATTGAATTTCAGCAGTCAGTGTCCAAGTCCCAGGTCAAA
CCTGATTCTGTCACAGCATCGCAGCCTCCATCCAAAGGCCCTCAAGCTCCTGCAGGCTATGCGAACGTGGCCACC
CATTCCACGTTGGTACTGACCGCCCAGACATATAATGCCTCTCCTGTGATTTCGTCTGTGAAGGCCGATAGGCCA
TCCTTGGAGAAGCCCGAGCCCATTCACCTCTCGGTGTCCACGCCTGTCACCCAGGGAGGCACAGTGAAGGTTCTC
ACCCAGGGGATCAACACACCCCCTGTGCTGGTTCACAACCAGCTGGTCCTCACCCCAAGCATTGTCACCACAAAC
AAGAAGCTTGCTGACCCCGTCACCCTTAAAATCGAGACCAAGGTCCTTCAGCCGGCCAACCTGGGGTCCACGCTC
ACGCCCCACCACCCTCCTGCTCTGCCCAGCAAACTGCCTACAGAAGTCAACCATGTCCCCTCGGGGCCCAGCATC
CCAGCAGATCGAACTGTCTCCCATTTGGCAGCTGCAAAGCTAGATGCTCATTCTCCTCGACCAAGTGGACCCGGG
CCATCCTCATTCCCAAGGGCAAGCCACCCCAGCAGTACTGCATCTACGGCGCTCTCCACCAACGCCACAGTCATG
CTGGCTGCAGGCATCCCAGTGCCCCAGTTCATCTCCAGCATCCACCCAGAGCAGTCTGTCATCATGCCACCCCAC
AGCATCACCCAGACTGTGTCCCTGAGCCACCTCTCCCAGGGCGAGGTGAGAATGAACACTCCCACGCTGCCCAGT
ATCACCTACAGCATCCGGCCAGAAGCGCTTCACTCTCCTCGGGCTCCGCTGCAGCCCCAGCAAATAGAGGTCAGG
GCCCCACAGCGTGCCAGCACCCCGCAGCCAGCCCCAGCTGGTGTGCCTGCACTGGCCTCCCAGCACCCTCCCGAG
GAGGAAGTGCATTATCACCTTCCTGTCGCTCGAGCCACAGCCCTGTGCAGTCAGAGGTACTAGTCATGCAGTCT
GAGTACCGACTGCACCCCTATACTGTGCCACGGGATGTGAGGATCATGGTGCATCCACATGTGACGGCAGTCAGC
GAGCAGCCCAGGGCCGCGGATGGGGTGGTGAAGGTGCCACCAGCCAGCAAGGCCCCTCAGCAGCCAGGGAAGGAA
GCTGCCAAGACACCAGATGCCAAAGCTGCCCCCACCCCCACCCCTGCCCCCGTCCCTGTCCCTGTCCCCCTTCCT
GCCCCTGCTCCTGCCCCTCATGGTGAGGCCCGTATCCTCACAGTTACCCCCAGTAACCAACTCCAGGGGCTGCCT
CTGACCCCTCCTGTGGTGGTGACCCATGGGGTGCAGATTGTGCACTCCAGCGGGGAGCTGTTTCAAGAGTACCGG
TACGGCGACATCCGCACCTACCACCCCCCGGCCCAGCTCACACACTCAGTTTCCCGCCGCTTCCTCTGTTGGC
CTGCCTTCCCGGACCAAGACAGCTGCTCAGGGCCCTCCTCCTGAAGGTGAGCCCCTGCAGCCTCCTCAGCCTGTG
CAGTCCACACAGCCTGCCCAGCCTGCACCACCCTGCCCGCCCTCCCAGCTCGGTCAGCCCGGCCAGCCACCAAGC
AGCAAGATGCCTCAAGTGTCCCAGGAGGCAAAGGGGACCCAGACGGGAGTAGAGCAGCCTCGCCTCCCAGCTGGA
CCTGCAAACAGGCCACCTGAGCCTCACACCCAGGTTCAGAGGGCACAAGCAGAAACAGGCCCGACTTCCTTCCCC
TCCCCTGTGTCTGTCTCCATGAAGCCTGACCTTCCAGTCTCTCTTCCCACTCAGACTGCCCCAAAACAGCCGTTG
TTTGTCCCAACAACCTCTGGCCCCAGCACCCCACCAGGACTGGTTCTGCCACACACTGAATTCCAGCCAGCCCCC
AAACAAGATTCCTCTCCACACCTGACTTCCCAGAGACCCGTGGATATGGTTCAACTTCTGAAGAAGTACCCCATC
GTGTGGCAGGGCCTGCTGGCCCTCAAGAATGACACAGCTGCTGTGCAGCTCCACTTCGTCTCTGGCAACAACGTC

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FIGURE 421D

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CTGGCCCATCGGTCCCTGCCCCTTTCTGAAGGAGGGCCCCCACTAAGGATCGCCCAGAGGATGCGGCTGGAGGCA
ACGCAGCTGGAAGGGGTTGCCCGAAGGATGACGGTGGAGACAGATTACTGTCTGCTGCTGGCTCTGCCCTGTGGC
CGTGACCAAGAGGATGTTGTGAGCCAGACCGAGTCCCTCAAGGCTGCCTTCATCACTTACCTGCAGGCCAAGCAG
GCGGCAGGGATCATCAACGTTCCCAACCCTGGCTCCAATCAGCCTGCCTACGTGCTGCAGATCTTCCCGCCCTGT
GAGTTCTCTGAGAGTCACCTGTCCCGCCTGGCCCCTGACCTCCTTGCCAGCATCTCCAACATCTCTCCCCACCTC
ATGATTGTCATTGCCTCCGTGTGAGCCACTGAGTGGTTATCACCTCAGTGAATCTTCCCAGGGCTCTGCAGTAAA
AACAAAGGACAACCCAGCCAAGCAGAGGAAGAAGCTGCCGAAGGGGACAGACTCCACTGCCAGACGGCCAGCCGT
TTGCTGTCCTGCCGCCCGGCTCAGTCGGCCAGACTTCCTCTAGGAGTGGTGCTGCTACCTTGTATGTTTACATAA
TGCTTTAGCCCAAGGACACATCACCAACCCATGGACTCGCAGACACCGGGGCTGGGTTTCTCTTTCCTCTTTTTG
GAGAAAAGGAACAGGGCAGTGGAATGAAAATTTTTTGTTTGTTTGTTTTTAAGAAACAAGAAACAGAACTGCCT
TTGCACTAAATTAGTGACTTGGACTTTTGCCCAGTGAAGACAGGCTGTGACACTCTGGATGTCTTGGTGTGTGTA
GACACACATTGCAGACTCTTAACGCAGGAAGGACTTCAAACTTCTGCTGAGACCTTGGGGTCAAGGAACATTTCA
TTGGTTTTTTTTGTCCACCCCCATCTCCCTTGCTCATTTGGATGCGTCACCTTAATTCTCCTGCTGCCACCGTCT
TTGATTCACCGGGATGTACAGTTACAGTTGAAGAGCAAACAGAAAGGTTTTCTCTTGGTGGGATATGCAGAACT
TGGGATGTGTGTATATATAAATATATAATATATATAAATATATATAATACTGACTTAAAAAATCAAATCCCCCGA
CATACGTTTTTTTTAATCTGTGCCAAAAATGTGTTTTCAGAGGAAATCTTATTTTCATATTCAGACTTTGTATTG
CCCACTCATTTGTATAAGTGCGCTTCGGTACAGCACGGGTCCTGCTCCCGCGATGTGGAAGTGTCACACGGCACC
TGTACAAAAGACTGGCTAACCCCTCTTCCTATTACCTTGATCTCTTCCCCCAACTTCCTAACACTTATTAATTT
ATGAAACTGTTTTTCTCAGCGCAGTTTTGTTTTGTGTGTCCATTGGATTACAAACTTTATTAAAAAATATAAAAC
AC
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FIGURE 422

MVRETRHLWVGNLPENVREEKIIEHFKRYGRVESVKILPKRGSEGGVAAFVDFVDIKSAQKAHNSVNKMGDRDLR
TDYNEPGTIPSAARGLDDTVSIASRSREVSGFRGGGGGPAYGPPPSLHAREGRYERRLDGASDNRERAYEHSAYG
HHERGTGGFDRTRHYDQDYYRDPRERTLQHGLYYASRSRSPNRFDAHDPRYEPRAREQFTLPSVVHRDIYRDDIT
REVRGRRPERNYQHSRSRSPHSSQSRNQSPQRLASQASRPTRSPSGSGSRSRSSSSDSISSSSSTSSDSSDSSSS
SSDDSPARSVQSAAVPAPTSQLLSSLEKDEPRKSFGIKVQNLPVRSTDTSLKDGLFHEFKKFGKVTSVQIHGTSE
ERYGLVFFRQQEDQEKALTASKGKLFFGMQIEVTAWIGPETESENEFRPLDERIDEFHPKATRTLFIGNLEKTTT
YHDLRNIFQRFGEIVDIDIKKVNGVPQYAFLQYCDIASVCKAIKKMDGEYLGNNRLKLGFGKSMPTNCVWLDGLS
SNVSDQYLTRHFCRYGPVVKVVFDRLKGMALVLYNEIEYAQAAVKETKGRKIGGNKIKVDFANRESQLAFYHCME
KSGQDIRDFYEMLAERREERRASYDYNQDRTYYESVRTPGTYPEDSRRDYPARGREFYSEWETYQGDYYESRYYD
DPREYRDYRNDPYEQDIREYSYRQRERERERERFESDRDRDHERRPIERSQSPVHLRRPQSPGASPSQAERLPSD
SERRLYSRSSDRSGSCSSLSPPRYEKLDKSRLERYTKNEKTDKERTFDPERVERERRLIRKEKVEKDKTDKQKRK
GKVHSPSSQSSETDQENEREQSPEKPRSCNKLSREKADKEGIAKNRLELMPCVVLTRVKEKEGKVIDHTPVEKLK
AKLDNDTVKSSALDQKLQVSQTEPAKSDLSKLESVRMKVPKEKGLSSHVEVVEKEGRLKARKHLKPEQPADGVSA
VDLEKLEARKRRFADSNLKAEKQKPEVKKSSPEMEDARVLSKKQPDVSSREVILLREGEAERKPVRKEILKRESK
KIKLDRLNTVASPKDCQELASISVGSGSRPSSDLQARLGELAGESVENQEVQSKKPIPSKPQLKQLQVLDDQGPE
REDVRKNYCSLRDETPERKSGQEKSHSVNTEEKIGIDIDHTQSYRKQMEQSRRKQQMEMEIAKSEKFGSPKKDVD
EYERRSLVHEVGKPPQDVTDDSPPSKKKRMDHVDFDICTKRERNYRSSRQISEDSERTGGSPSVRHGSFHEDEDP
IGSPRLLSVKGSPKVDEKVLPYSNITVREESLKFNPYDSSRREQMADMAKIKLSVLNSEDELNRWDSQMKQDAGR
FDVSFPNSIIKRDSLRKRSVRDLEPGEVPSDSDEDGEHKSHSPRASALYESSRLSFLLRDREDKLRERDERLSSS
LERNKFYSFALDKTITPDTKALLERAKSLSSSREENWSFLDWDSRFANFRNNKDKEKVDSAPRPIPSWYMKKKKI
RTDSEGKMDDKKEDHKEEEQERQELFASRFLHSSIFEQDSKRLQHLERKEEDSDFISGRIYGKQTSEGANSTTDS
IQEPVVLFHSRFMELTRMQQKEKEKDQKPKEVEKQEDTENHPKTPESAPENKDSELKTPPSVGPPSVTVVTLESA
PSALEKTTGDKTVEAPLVTEEKTVEPATVSEEAKPASEPAPAPVEQLEQVDLPPGADPDKEAAMMPAGVEEGSSG
DQPPYLDAKPPTPGASFSQAESNVDPEPDSTQPLSKPAQKSEEANEPKAEKPDATADAEPDANQKAEAAPESQPP
ASEDLEVDPPVAAKDKKPNKSKRSKTPVQAAAVSIVEKPVTRKSERIDREKLKRSNSPRGEAQKLLELKMEAEKI
TRTASKNSAADLEHPEPSLPLSRTRRRNVRSVYATMGDHENRSPVKEPVEQPRVTRKRLERELQEAAAVPTTPRR
GRPPKTRRRADEEEENEAKEPAETLKPPEGWRSPRSQKTAAGGGPQGKKG

FIGURE 423

G**ATG**GCGGGGAGCGGCGTCCGCCAAGCTACTTCTACCGCCAGCACCTTCGTGAAGCCCATTTTCAGTCGGGACAT
GAACGAGGCCAAGCGGAGGGTGCGCGAGCTCTACCGCGCCTGGTATCGGGAGGTGCCGAACACTGTGCACCAATT
CCAGCTGGACATCACTGTGAAAATGGGACGGGATAAAGTCCGAGAAATGTTTATGAAGAATGCCCATGTCACAGA
CCCCAGGGTGGTTGATCTTCTGGTCATTAAGGGAAAGATCGAACTGGAAGAAACAATTAAAGTATGGAAGCAGCG
GACACATGTTATGCGGTTCTTCCATGAAACAGAAGCGCCAAGGCCAAAGGATTTCCTATCCAAGTTCTATGTTGG
CCACGATCCA**TGA**AGTCATTCAGTGGAAAGATGCACGTTGATACTATTTTAGAGCACAAATAAACTCACTATACA
ATGGTCACTTTGTGATAGAATTCCATTGATGAACCAATTTTCTGCAGCCTCTTTTTGCCTGAGCAAGTGGGACCT
TGGTATACACATCACCTGTTCTTTCCCTTTTCTTGAAATGTGGTGTTTGCTGTAAATTGGATTGAATTATTTTTC
TCAGAGCCTTGCATGTCAGTAAACAGGAAGGAAGGAGGCCATCTGTTCAAAAATTGTGACATTGGGCATGAGGCT
GGACGACTTGTTAATGTAGTTGTTTCTATAGCCCCTATGATTAGACACTTCAGTGTCAGGGCACAGATTATCTAA
AATTAGCCAGCTCTTCCTGTCAGGGATCAGGGCAGCACTAACAGGCGCAAAAGTAGAGCTGTCAAGATGGGCTAG
TTTTCCTTGGGTTCTGAAGAAAATGGATGTGCAAAGGCTTGGCTCCGCTACTTGTAACAAGCTCCAGCCCTTAAA
ATGAAATTAACTTCCTACTCAGGCACCCTGCTTAGGTGCACAGCTGTTCAATATACACAGAGAACAGAAATATTC
CTACTGTCTTTGGAAACCCTGGTGTACCTCTCAGTGGCAGAATAAACATCAACACAGGTTCAAGAACTGAAAAAA
AAAAAAAAAAAAA

FIGURE 424

MAGSGVRQATSTASTFVKPIFSRDMNEAKRRVRELYRAWYREVPNTVHQFQLDITVKMGRDKVREMFMKNAHVTD
PRVVDLLVIKGKIELEETIKVWKQRTHVMRFFHETEAPRPKDFLSKFYVGHDP

FIGURE 425

GCGTCCCCCACACCACAGACCCGCGCCGCCGACGACCCAGCAGCCGCC**ATG**CGTCTGCTCCGAGGTGTGTTTGTA
GTTGCTGCTAAGCGAACGCCCTTTGGAGCTTACGGAGGCCTTCTGAAAGACTTCACTGCTACTGACTTGTCTGAA
TTTGCTGCCAAGGCTGCCTTGTCTGCTGGCAAAGTCTCACCTGAAACAGTTGACAGTGTGATTATGGGCAATGTC
CTGCAGAGTTCTTCAGATGCTATATATTTGGCAAGGCATGTTGGTTTGCGTGTGGGAATCCCAAAGGAGACCCCA
GCTCTCACGATTAATAGGCTCTGTGGTTCTGGTTTTCAGTCCATTGTGAATGGATGTCAGGAAATTTGTGTTAAA
GAAGCTGAAGTTGTTTTATGTGGAGGAACCGAAAGCATGAGCCAAGCTCCCTACTGTGTCAGAAATGTGCGTTTT
GGAACCAAGCTTGGATCAGATATCAAGCTGGAAGATTCTTTATGGGTATCATTAACAGATCAGCATGTCCAGCTC
CCCATGGCAATGACTGCAGAGAATCTTACTGTAAAACACAAAATAAGCAGAGAAGAATGTGACAAATATGCCCTG
CAGTCACAGCAGAGATGGAAAGCTGCTAATGATGCTGGCTACTTTAATGATGAAATGGCACCAATTGAAGTGAAG
ACAAAGAAAGGAAAACAGACAATGCAGGTAGACGAGCATGCTCGGCCCCAAACCACCCTGGAACAGTTACAGAAA
CTTCCTCCAGTATTCAAGAAAGATGGAACTGTTACTGCAGGGAATGCATCGGGTGTAGCTGATGGTGCTGGAGCT
GTTATCATAGCTAGTGAAGATGCTGTTAAGAAACATAACTTCACACCACTGGCAAGAATTGTGGGCTACTTTGTA
TCTGGATGTGATCCCTCTATCATGGGTATTGGTCCTGTCCCTGCTATCAGTGGGGCACTGAAGAAAGCAGGACTG
AGTCTTAAGGACATGGATTTGGTAGAGGTGAATGAAGCTTTTGCTCCCCAGTACTTGGCTGTTGAGAGGAGTTTG
GATCTTGACATAAGTAAAACCAATGTGAATGGAGGAGCCATTGCTTTGGGTCACCCACTGGGAGGATCTGGATCA
AGAATTACTGCACACCTGGTTCACGAATTAAGGCGTCGAGGTGGAAAATATGCCGTTGGATCAGCTTGCATTGGA
GGTGGCCAAGGTATTGCTGTCATCATTCAGAGCACAGCC**TGA**AGAGACCAGTGAGCTCACTGTGACCCATCCTTA
CTCTACTTGGCCAGGCCACAGTAAAACAAGTGACCTTCAGAGCAGCTGCCACAACTGGCCATGCCCTGCCATTGA
AACAGTGATTAAGTTTGATCAAGCCATGGTGACACAAAAATGCATTGATCATGAATAGGAGCCCATGCTAGAAGT
ACATTCTCTCAGATTTGAACCAGTGAAATATGATGTATTTCTGAGCTAAAACTCAACTATAGAAGACATTAAAAG
AAATCGTATTCTTGCCAAGTAACCACCACTTCTGCCTTAGATAATATGATTATAAGGAAATCAAATAAATGTTGC
CTTAACTTC

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FIGURE 426

MRLLRGVFVVAAKRTPFGAYGGLLKDFTATDLSEFAAKAALSAGKVSPETVDSVIMGNVLQSSSDAIYLARHVGL
RVGIPKETPALTINRLCGSGFQSIVNGCQEICVKEAEVVLCGGTESMSQAPYCVRNVRFGTKLGSDIKLEDSLWV
SLTDQHVQLPMAMTAENLTVKHKISREECDKYALQSQQRWKAANDAGYFNDEMAPIEVKTKKGKQTMQVDEHARP
QTTLEQLQKLPPVFKKDGTVTAGNASGVADGAGAVIIASEDAVKKHNFTPLARIVGYFVSGCDPSIMGIGPVPAI
SGALKKAGLSLKDMDLVEVNEAFAPQYLAVERSLDLDISKTNVNGGAIALGHPLGGSGSRITAHLVHELRRRGGK
YAVGSACIGGGQGIAVIIQSTA

FIGURE 427

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CGCGCCAGGGCGAGGGCACCGCCGCCGGTCGGGCGCGCTGGGCCTGCCCGGAATCCCGCCGCCTGCGCCCCGCGC
CCCGCGCCCTGCGGGCCATGGGAGCCGGCCGCCGGCAGGGACGACGCCTGTGAGACCCGCGAGCGGCCTCGGGGA
CCATGGGGAGCGATCGGGCCCGCAAGGGCGGAGGGGGCCCGAAGGACTTCGGCGCGGGACTCAAGTACAACTCCC
GGCACGAGAAAGTGAATGGCTTGGAGGAAGGCGTGGAGTTCCTGCCAGTCAACAACGTCAAGAAGGTGGAAAAGC
ATGGCCCGGGGCGCTGGGTGGTGCTGGCAGCCGTGCTGATCGGCCTCCTCTTGGTCTTGCTGGGGATCGGCTTCC
TGGTGTGGCATTTGCAGTACCGGGACGTGCGTGTCCAGAAGGTCTTCAATGGCTACATGAGGATCACAAATGAGA
ATTTTGTGGATGCCTACGAGAACTCCAACTCCACTGAGTTTGTAAGCCTGGCCAGCAAGGTGAAGGACGCGCTGA
AGCTGCTGTACAGCGGAGTCCCATTCCTGGGCCCCTACCACAAGGAGTCGGCTGTGACGGCCTTCAGCGAGGGCA
GCGTCATCGCCTACTACTGGTCTGAGTTCAGCATCCCGCAGCACCTGGTGGAGGAGGCCGAGCGCGTCATGGCCG
AGGAGCGCGTAGTCATGCTGCCCCCGCGGGGCGCGCTCCCTGAAGTCCTTTGTGGTCACCTCAGTGGTGGCTTTCC
CCACGGACTCCAAAACAGTACAGAGGACCCAGGACAACAGCTGCAGCTTTGGCCTGCACGCCCGCGGTGTGGAGC
TGATGCGCTTCACCACGCCCGGCTTCCCTGACAGCCCCTACCCCGCTCATGCCCGCTGCCAGTGGGCCCTGCGGG
GGGACGCCGACTCAGTGCTGAGCCTCACCTTCCGCAGCTTTGACCTTGCGTCCTGCGACGAGCGCGGCAGCGACC
TGGTGACGGTGTACAACACCCTGAGCCCCATGGAGCCCCACGCCCTGGTGCAGTTGTGTGGCACCTACCCTCCCT
CCTACAACCTGACCTTCCACTCCTCCCAGAACGTCCTGCTCATCACACTGATAACCAACACTGAGCGGCGGCATC
CCGGCTTTGAGGCCACCTTCTTCCAGCTGCCTAGGATGAGCAGCTGTGGAGGCCGCTTACGTAAAGCCCAGGGGA
CATTCAACAGCCCCTACTACCCAGGCCACTACCCACCCAACATTGACTGCACATGGAACATTGAGGTGCCCAACA
ACCAGCATGTGAAGGTGCGCTTCAAATTCTTCTACCTGCTGGAGCCCGGCGTGCCTGCGGGCACCTGCCCCAAGG
ACTACGTGGAGATCAATGGGGAGAAATACTGCGGAGAGAGGTCCCAGTTCGTCGTCACCAGCAACAGCAACAAGA
TCACAGTTCGCTTCCACTCAGATCAGTCCTACACCGACACCGGCTTCTTAGCTGAATACCTCTCCTACGACTCCA
GTGACCCATGCCCGGGGCAGTTCACGTGCCGCACGGGGCGGTGTATCCGGAAGGAGCTGCGCTGTGATGGCTGGG
CCGACTGCACCGACCACAGCGATGAGCTCAACTGCAGTTGCGACGCCGGCCACCAGTTCACGTGCAAGAACAAGT
TCTGCAAGCCCCTCTTCTGGGTCTGCGACAGTGTGAACGACTGCGGAGACAACAGCGACGAGCAGGGGTGCAGTT
GTCCGGCCCAGACCTTCAGGTGTTCCAATGGGAAGTGCCTCTCGAAAAGCCAGCAGTGCAATGGGAAGGACGACT
GTGGGGACGGGTCCGACGAGGCCTCCTGCCCCAAGGTGAACGTCGTCACTTGTACCAAACACACCTACCGCTGCC
TCAATGGGCTCTGCTTGAGCAAGGGCAACCCTGAGTGTGACGGGAAGGAGGACTGTAGCGACGGCTCAGATGAGA
AGGACTGCGACTGTGGGCTGCGGTCATTCACGAGACAGGCTCGTGTTGTTGGGGGCACGGATGCGGATGAGGGCG
AGTGGCCCTGGCAGGTAAGCCTGCATGCTCTGGGCCAGGGCCACATCTGCGGTGCTTCCCTCATCTCTCCCAACT
GGCTGGTCTCTGCCGCACACTGCTACATCGATGACAGAGGATTCAGGTACTCAGACCCCACGCAGTGGACGGCCT
TCCTGGGCTTGCACGACCAGAGCCAGCGCAGCGCCCCTGGGGTGCAGGAGCGCAGGCTCAAGCGCATCATCTCCC
ACCCCTTCTTCAATGACTTCACCTTCGACTATGACATCGCGCTGCTGGAGCTGGAGAAACCGGCAGAGTACAGCT
CCATGGTGCGGCCCATCTGCCTGCCGGACGCCTCCCATGTCTTCCCTGCCGGCAAGGCCATCTGGGTCACGGGCT
GGGGACACACCCAGTATGGAGGCACTGGCGCGCTGATCCTGCAAAAGGGTGAGATCCGCGTCATCAACCAGACCA
CCTGCGAGAACCTCCTGCCGCAGCAGATCACGCCGCGCATGATGTGCGTGGGCTTCCTCAGCGGCGGCGTGGACT
CCTGCCAGGGTGATTCCGGGGGACCCCTGTCCAGCGTGGAGGCGGATGGGCGGATCTTCCAGGCCGGTGTGGTGA
GCTGGGGAGACGGCTGCGCTCAGAGGAACAAGCCAGGCGTGTACACAAGGCTCCCTCTGTTTCGGGACTGGATCA
AAGAGAACACTGGGGTATAGGGGCCGGGGCCACCCAAATGTGTACACCTGCGGGGCCACCCATCGTCCACCCCAG
TGTGCACGCCTGCAGGCTGGAGACTGGACCGCTGACTGCACCAGCGCCCCCAGAACATACACTGTGAACTCAATC
TCCAGGGCTCCAAATCTGCCTAGAAAACCTCTCGCTTCCTCAGCCTCCAAAGTGGAGCTGGGAGGTAGAAGGGGA
GGACACTGGTGGTTCTACTGACCCAACTGGGGGCAAAGGTTTGAAGACACAGCCTCCCCCGCCAGCCCCAAGCTG
GGCCGAGGCGCGTTTGTGTATATCTGCCTCCCCTGTCTGTAAGGAGCAGCGGGAACGGAGCTTCGGAGCCTCCTC
AGTGAAGGTGGTGGGGCTGCCGGATCTGGGCTGTGGGGCCCTTGGGCCACGCTCTTGAGGAAGCCCAGGCTCGGA
GGACCCTGGAAAACAGACGGGTCTGAGACTGAAATTGTTTTACCAGCTCCCAGGGTGGACTTCAGTGTGTGTATT
TGTGTAAATGAGTAAAACATTTTATTTCTTTTTAAAAAAAAAA
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FIGURE 428

MGSDRARKGGGGPKDFGAGLKYNSRHEKVNGLEEGVEFLPVNNVKKVEKHGPGRWVVLAAVLIGLLLVLLGIGFL
VWHLQYRDVRVQKVFNGYMRITNENFVDAYENSNSTEFVSLASKVKDALKLLYSGVPFLGPYHKESAVTAFSEGS
VIAYYWSEFSIPQHLVEEAERVMAEERVVMLPPRARSLKSFVVTSVVAFPTDSKTVQRTQDNSCSFGLHARGVEL
MRFTTPGFPDSPYPAHARCQWALRGDADSVLSLTFRSFDLASCDERGSDLVTVYNTLSPMEPHALVQLCGTYPPS
YNLTFHSSQNVLLITLITNTERRHPGFEATFFQLPRMSSCGGRLRKAQGTFNSPYYPGHYPPNIDCTWNIEVPNN
QHVKVRFKFFYLLEPGVPAGTCPKDYVEINGEKYCGERSQFVVTSNSNKITVRFHSDQSYTDTGFLAEYLSYDSS
DPCPGQFTCRTGRCIRKELRCDGWADCTDHSDELNCSCDAGHQFTCKNKFCKPLFWVCDSVNDCGDNSDEQGCSC
PAQTFRCSNGKCLSKSQQCNGKDDCGDGSDEASCPKVNVVTCTKHTYRCLNGLCLSKGNPECDGKEDCSDGSDEK
DCDCGLRSFTRQARVVGGTDADEGEWPWQVSLHALGQGHICGASLISPNWLVSAAHCYIDDRGFRYSDPTQWTAF
LGLHDQSQRSAPGVQERRLKRIISHPFFNDFTFDYDIALLELEKPAEYSSMVRPICLPDASHVFPAGKAIWVTGW
GHTQYGGTGALILQKGEIRVINQTTCENLLPQQITPRMMCVGFLSGGVDSCQGDSGGPLSSVEADGRIFQAGVVS
WGDGCAQRNKPGVYTRLPLFRDWIKENTGV

FIGURE 429

TAGGAATTTCAAGGTGTAGGTCAGATATT**TGA**GAATAGGGGATTTTTTTGATGTGCCTTAAATTATACCAAAGAT
TACTAATTATTCCTCTTTGCCCAAAATACTTGCATCCAAGGTTCTAGTCTCTGTTGCTGTGCTGGTCTTTAGCCC
CACTGCTTGCACTGATGTCCCTCCTTTTCACGGAGACCTATCTGAGGTACAGGATGGGGCTGGCACCAGATGATG
TCCCACCACAGTCCCTCACCTCCGGCCTCCACATGACAGAACCAATTTACACTCAACCATGACCTCACCCCTCCT
TGGTTTCTCCCTCGATCTGTGGCCCTTTTTGGATGTATTCTTATCTAACAACACAATCCGGAAAGACTGAATTGA
ATATTTATACTAATGGTTCATATCCTTTATTGCTCAATGATCTAATTAAAGGGATCATTGCCACATTTCATGTTT
ATATTTCTACAATTTGTTTAGAAAACATCTCCTGACCATATCAGTAGCTCGTGTTATCTTTTTATCAACTGCTTC
CCAGAGTCCTAAAACAATAGAAATTTTGGATTGAAAAGTTCAGCATAAGGAGTTTGAGTCAGTAAAGGATGGGAT
AAAGGAGTCGAGATGATTCAATGAAAAGTATCACAAAAAAGAGATTGATCAACAAGAGAAATAAAAAAGCCCAAG
AGGAAGTGGTAGGGGAAGGAATTTAAGAACAGCAATAAGTAAAACTCTTAAGTAACTCCAAAAAGAAAATGGTAC
ATTTTGCCAAAGACCACTTATACTTGAGAACATGGAAGAATTTGCCTGATACTCTCTTTGGGGAAAAGAGTCTCT
CCTCTTTTCCTCAAACCCCAGTACACTCAGCCTCTCTGCCCCACCTTCTCCTGACTTTGTCCTCACTTGCTTCTG
CAGTACATTGGAACCTGAATTGAAAGAAAGTCTTCCTTGAATAATTGGAGTTTGTCTTGAGAGGCAAATATAGCC
CCAAGAATCACAAGATTCGAGGACCATGTAGGTCTTTTACGTAGCCCAAATCCATAAATTAGTCTCACTTTTTGT
ATTTATCGTTTCATATTAAACCCTCTATATCAAATGTTCATCATGATTTTGTATGATTTTTATAACTATTTATT
CATTTTATTAGATTTATTCTAAAATTTTTTAATGGTAAATTCTTAAACTGTGGAAACCACTGAAGGTGCTTATTA
ACTGTTCTCCCAGATTTGTACAAGTATTGGATGATTCCTTGAGTTTACAGCTGTACAAATAGTGTGGAAAATAAA
CTTTTTTTAAAAAAGA

FIGURE 430

GISRCRSDI

FIGURE 431

CTGACTTGGCAGGACTGTGCAATTGTCAGAAGGCCGTGGGGAGTGGGGGCCAGTGCCTGCAGCCTGCCCTGCCTC
TCTCACAGGCCCTTAGAGCATCGCCAGGTGCAGAGCTCCACAGCTCTCTTTCCCAAGGAGTAATCAGAGGGTGAG
AACGTGGAGCCTGGTGGACAGGTGAAAGCACTGGGATCTTTCTGCCCAGAAAGGGGAAAGTTGCACATTTATATC
CTAGAGGGAAGCGACAGCAGTGCTTCTCCCTGTGCTGAGGTACAGGAGCC**ATG**TGGCTAGAAATCCTCCTCACTT
CAGTGCTGGGCTTTGCCATCTACTGGTTCATCTCCCGGGACAAAGAGGAAACTTTGCCACTTGAAGATGGGTGGT
GGGGGCCAGGCACGAGGTCCGCAGCCAGGGAGGACGACAGCATCCGCCCTTTCAAGGTGGAAACGTCAGATGAGG
AGATCCACGACTTACACCAGAGGATCGATAAGTTCCGTTTCACCCCACCTTTGGAGGACAGCTGCTTCCACTATG
GCTTCAACTCCAACTACCTGAAGAAAGTCATCTCCTACTGGCGGAATGAATTTGACTGGAAGAAGCAGGTGGAGA
TTCTCAACAGATACCCTCACTTCAAGACTAAGATTGAAGGGCTGGACATCCACTTCATCCACGTGAAGCCCCCCC
AGCTGCCCGCAGGCCATACCCCGAAGCCCTTGCTGATGGTGCACGGCTGGCCCGGCTCTTTCTACGAGTTTTATA
AGATCATCCCACTCCTGACTGACCCCAAGAACCATGGCCTGAGCGATGAGCACGTTTTTGAAGTCATCTGCCCTT
CCATCCCTGGCTATGGCTTCTCAGAGGCATCCTCCAAGAAGGGGTTCAACTCGGTGGCCACCGCCAGGATCTTTT
ACAAGCTGATGCTGCGGCTGGGCTTCCAGGAATTCTACATTCAAGGAGGGGACTGGGGGTCCCTGATCTGCACTA
ATATGGCCCAGCTGGTGCCCAGCCACGTGAAAGGCCTGCACTTGAACATGGCTTTGGTTTTAAGCAACTTCTCTA
CCCTGACCCTCCTCCTGGGACAGCGTTTCGGGAGGTTTCTTGGCCTCACTGAGAGGGATGTGGAGCTGCTGTACC
CCGTCAAGGAGAAGGTATTCTACAGCCTGATGAGGGAGAGCGGCTACATGCACATCCAGTGCACCAAGCCTGACA
CCGTAGGCTCTGCTCTGAATGACTCTCCTGTGGGTCTGGCTGCCTATATTCTAGAGAAGTTTTCCACCTGGACCA
ATACGGAATTCCGATACCTGGAGGATGGAGGCCTGGAAAGGAAGTTCTCCCTGGACGACCTGCTGACCAACGTCA
TGCTCTACTGGACAACAGGCACCATCATCTCCTCCCAGCGCTTCTACAAGGAGAACCTGGGACAGGGCTGGATGA
CCCAGAAGCATGAGCGGATGAAGGTCTATGTGCCCACTGGCTTCTCTGCCTTCCCTTTTGAGCTATTGCACACGC
CTGAAAAGTGGGTGAGGTTCAAGTACCCAAAGCTCATCTCCTATTCCTACATGGTTCGTGGGGGCCACTTTGCGG
CCTTTGAGGAGCCGGAGCTGCTCGCCCAGGACATCCGCAAGTTCCTGTCGGTGCTGGAGCGGCAA**TGA**CCCACCC
CTCTCCCCCGCCTGCCACCTCCCCCCACAAGTGCCCTCCAGGCTTTTCTTGGGGAAGATACCCCTTTTCTGAGG
AATGAGTTTGCCTCCGTCCCCTGCCCATGCTGGGAGCCCACGCTCACCCCCTCACCCCTCCAAGCTCACTCCCCA
ACCCCCAACTCCGTGTGGTAAGCAACATGGCTTTGATGATAAACGACTTTACTCTA

FIGURE 432

MWLEILLTSVLGFAIYWFISRDKEETLPLEDGWWGPGTRSAAREDDSIRPFKVETSDEEIHDLHQRIDKFRFTPP
LEDSCFHYGFNSNYLKKVISYWRNEFDWKKQVEILNRYPHFKTKIEGLDIHFIHVKPPQLPAGHTPKPLLMVHGW
PGSFYEFYKIIPLLTDPKNHGLSDEHVFEVICPSIPGYGFSEASSKKGFNSVATARIFYKLMLRLGFQEFYIQGG
DWGSLICTNMAQLVPSHVKGLHLNMALVLSNFSTLTLLLGQRFGRFLGLTERDVELLYPVKEKVFYSLMRESGYM
HIQCTKPDTVGSALNDSPVGLAAYILEKFSTWTNTEFRYLEDGGLERKFSLDDLLTNVMLYWTTGTIISSQRFYK
ENLGQGWMTQKHERMKVYVPTGFSAFPFELLHTPEKWVRFKYPKLISYSYMVRGGHFAAFEEPELLAQDIRKFLS
VLERQ

FIGURE 433

CGGCACGAGCGCCGCCGAGGATTCAGCAGCCTCCCCCTTGAGCCCCCTCGCTTCCCGACGTTCCGTTCCCCCCTG
CCCGCCTTCTCCCGCCACCGCCGCCGCCGCCTTCCGCAGGCCGTTTCCACCGAGGAAAAGGAATCGTATCGT**ATG**

TCCGCTATCCAGAACCTCCACTCTTTCGACCCCTTTGCTGATGCAAGTAAGGGTGATGACCTGCTTCCTGCTGGC
ACTGAGGATTATATCCATATAAGAATTCAACAGAGAAACGGCAGGAAGACCCTTACTACTGTCCAAGGGATCGCT
GATGATTACGATAAAAAGAAACTAGTGAAGGCGTTTAAGAAAAAGTTTGCCTGCAATGGTACTGTAATTGAGCAT
CCGGAATATGGAGAAGTAATTCAGCTACAGGGTGACCAACGCAAGAACATATGCCAGTTCCTCGTAGAGATTGGA
CTGGCTAAGGACGATCAGCTGAAGGTTCATGGGTTT**TAA**GTGCTTGTGGCTCACTGAAGCTTAAGTGAGGATTTC
CTTGCAATGAGTAGAATTTCCCTTCTCTCCCTTGTCACAGGTTTAAAAACCTCACAGCTTGTATAATGTAACCAT
TTGGGGTCCGCTTTTAACTTGGACTAGTGTAACTCCTTCATGCAATAAACTGAAAAGAGCCATGCTGTCTAGTCT
TGAAGTCCCTCATTTAAACAGAGGTCAAGCAATAGGCGCCTGGCAGTGTCAAGCCTGAAACCAAGCAATACCGTC
ATGTTTCAGCCAAGCCCAGAGCCCTAAGATTACAAACAACTATGGCCGGAACCTCCTCAGCTCTCCCTCTGCAGA
GTTCCCTACCCTAAGAGAATGTTACCACCTGAACAGTCCTCGGTGAATCTGAGAGGAGAGGATGGGGTAAGGCAG
AAGCACCAGCTGTACTACTAGAAGGGAGCTTTTGGTGGTAGATCCCCTGGTGTCTCCAACCTGACTAGGTGGACA
GAGCTCAAAGAGGCCCTCTTACCGCTAGCGAGGTGATAGGACATCTGGCTTGCCACAAAGGTCTGTTCGACCAGA
CATATCCTAGCTAAGGGATGTCCAAACATCAGAATGTGAGGCCAACCTTCTATCAGAGTTAAACTTTTGACAAGG
GAACAAATCTCAAACTGATCCATCAGTCATGTAGCTAGCTGTAGAGCTTGCAACTTAATAGCAGCAGCTGCCCAA
TGCCATGTGAAGTAACAAACTGGTTTTTGGTTTTTTTTTCCCCTTCAGTTTTAATGTTATGTGTAATGTATTTAA
ACCCTTATTTAAATAAAACTTGTTTTCAGAAAAAAAAAAAAAAAAAAAAA

FIGURE 434

MSAIQNLHSFDPFADASKGDDLLPAGTEDYIHIRIQQRNGRKTLTTVQGIADDYDKKKLVKAFKKKFACNGTVIE
HPEYGEVIQLQGDQRKNICQFLVEIGLAKDDQLKVHGF

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FIGURE 435A

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GAGGAAGCGATTCTGGGGTTTCTGTGTTGAACGGTTCTTGTCCGCGAAGATGCGCTTCGGCCTCTGTCAGGGGAC
TTGAACGGGCTTAGTGGGCTTCAGCCAGCTTTTCTCCACCGGTTCCCCACGGGGACCCCCCCCCCCGGCCGTTG
CAATGGCGGGCGTGGGGCCGGGGGGCTACGCGGCGGAGTTCGTGCCACCGCCAGAGTGCCCCGTCTTTGAGCCGA
GTTGGGAGGAGTTCACAGATCCGCTCAGCTTTATCGGCCGCATCCGGCCTTTGGCGGAGAAAACCGGCATCTGCA
AAATTCGGCCGCCCAAGGACTGGCAGCCTCCATTTGCCTGTGAAGTAAAAAGCTTTCGTTTCACTCCAAGAGTCC
AGCGCCTGAATGAACTTGAGGCAATGACCAGAGTGAGATTGGATTTCTTGGATCAACTAGCAAAATTTTGGGAAC
TTCAAGGATCTACTCTGAAGATCCCTGTGGTAGAGAGAAAAATCCTGGATCTGTATGCTTTGAGCAAGATTGTTG
CCAGCAAAGGAGGTTTTGAAATGGTCACCAAAGAGAAGAAATGGTCTAAAGTGGGTAGTCGCTTGGGATATCTGC
CAGGAAAAGGAACTGGGTCTCTTTTGAAGTCACATTATGAAAGAATTCTCTACCCATATGAGCTTTTCCAGTCTG
GTGTGAGCCTTATGGGTGTGCAGATGCCTAATTTAGATCTTAAAGAAAAGTGGAGCCTGAGGTTCTCAGCACTG
ATACCCAAACTTCCCCAGAGCCAGGCACAAGGATGAACATTCTGCCGAAGAGAACAAGACGTGTGAAGACTCAGT
CAGAATCTGGAGATGTGAGTAGAAACACGGAACTGAAGAAACTTCAGATTTTTGGGGCTGGGCCCAAGGTTGTGG
GCTTGGCAATGGGAACAAAAGATAAAGAAGATGAGGTCACCCGAAGACGAAAAGTTACCAACAGGTCAGACGCAT
TTAACATGCAAATGAGACAACGGAAAGGCACTCTCTCTGTTAACTTTGTTGATCTCTATGTTTGTATGTTTTGTG
GTCGGGGAAACAATGAAGATAAATTGCTTTTGTGTGATGGATGTGATGACAGCTATCATACATTTTGTCTAATTC
CTCCACTACCTGATGTGCCCAAAGGAGACTGGAGGTGTCCTAAATGTGTCGCCGAGGAATGTAGCAAACCTCGAG
AAGCCTTTGGATTTGAACAAGCTGTACGAGAGTATACACTTCAGAGCTTTGGAGAGATGGCAGATAATTTTAAGT
CTGATTATTTTAATATGCCAGTCCATATGGTTCCCACAGAACTAGTAGAAAAGGAATTTTGGCGGCTGGTAAGCA
GCATTGAAGAAGATGTTATTGTGGAATATGGAGCAGATATCTCCTCAAAAGACTTTGGAAGTGGATTTCCGGTGA
AGGATGGGCGGAGAAAGATTCTGCCAGAAGAAGAGGAATATGCACTTTCTGGTTGGAATTTGAATAACATGCCTG
TCCTGGAACAGTCTGTTCTTGCACATATTAATGTGGACATCTCTGGTATGAAAGTGCCGTGGCTCTATGTGGGAA
TGTGCTTCTCTTCTTTTGCTGGCACATTGAGGATCACTGGAGTTATTCCATCAACTACTTGCACTGGGGGGAGC
CAAAGACATGGTATGGTGTGCCATCTCATGCTGCAGAGCAACTGGAGGAGGTGATGAGAGAGCTGGCCCCCGAGT
TATTTGAATCCCAGCCTGATCTTCTGCATCAGTTAGTTACCATCATGAACCCCAACGTGCTAATGGAGCATGGTG
TGCCTGTGTACAGGACCAATCAGTGTGCTGGCGAGTTGTTGTGACATTTCCTCGTGCCTATCACTCTGGATTTA
ACCAGGGCTACAACTTTGCTGAAGCTGTGAACTTCTGTACTGCTGACTGGTTGCCCATTGGACGTCAATGTGTAA
ATCATTACCGACGCCTAAGGCGCCACTGTGTCTTTTCACACGAGGAACTAATTTTCAAGATGGCAGCAGATCCAG
AATGCTTAGATGTGGGGCTGGCTGCCATGGTCTGCAAAGAATTGACTCTCATGACTGAAGAAGAAACACGATTAA
GAGAGTCTGTTGTACAGATGGGTGTCCTGATGTCAGAAGAAGAAGTGTTTGAACTTGTTCCTGATGATGAGCGGC
AGTGTTCAGCATGCAGAACCACATGTTTTCTCTCTGCTCTCACATGTTCCTGTAATCCTGAGCGGCTTGTATGTC
TCTACCATCCAACTGATCTGTGCCCCTGCCCCATGCAGAAGAAATGTCTTAGATATCGCTACCCATTAGAAGACC
TCCCTTCTCTGCTATATGGTGTAAAAGTCAGGGCACAGTCCTATGACACTTGGGTCAGTCGTGTTACAGAAGCAT
TGTCTGCTAACTTCAACCACAAAAAAGATTTGATTGAATTGCGAGTAATGCTGGAAGATGCTGAGGATAGGAAAT
ACCCAGAGAATGATCTCTTTCGAAAACTCAGGGATGCTGTAAAGAAGCTGAGACCTGTGCTTCTGTGGCTCAGC
TGCTTCTGAGCAAAAAGCAGAAACACAGACAGAGCCCAGATAGTGGGAGGACTCGGACCAAACTGACAGTGGAAG
AATTGAAGGCCTTTGTCCAACAACTTTTTAGTCTTCCGTGTGTCATCAGCCAAGCTCGGCAAGTAAAGAATCTGC
TAGATGATGTGGAAGAGTTTCATGAACGTGCTCAGGAGGCCATGATGGATGAAACCCCAGATTCTTCCAAACTCC
AGATGTTGATAGATATGGGCTCTAGTCTCTATGTGGAACTCCCTGAATTACCACGACTGAAGCAAGAGTACAAC
AGGCTCGGTGGTTGGACGAAGTAAGACTGACCTTATCAGATCCGCAACAAGTCACTTTGGATGTCATGAAGAAGC
TGATAGACTCTGGGGTAGGGTTGGCACCCCACCATGCTGTGGAGAAAGCAATGGCTGAACTACAGGAGCTCCTTA
CAGTCTCTGAACGATGGGAAGAAAAGGCTAAGGTCTGCCTACAGGCAAGACCGAGGCACAGTGTGGCAAGTTTAG
AAAGCATTGTGAATGAAGCCAAGAACATTCCAGCCTTTCTACCCAATGTGTTGTCCTTGAAAGAAGCCTTACAAA
AGGCTCGAGAATGGACCGCTAAAGTGGAAGCTATTCAGAGTGGCAGCAATTACGCTTATTTGGAGCAGCTTGAGA
GCTTGTCTGCGAAAGGACGCCCTATTCCTGTGCGTCTTGAAGCACTGCCGCAAGTGGAATCACAGGTAGCAGCAG
CACGGGCATGGAGAGAACGGACTGGGCGGACGTTTCTTAAGAAGAATTCTAGCCATACATTGTTACAGGTGCTGA
GCCCCCGGACCGACATTGGTGTATATGGGAGTGGCAAAAATAGGAGGAAAAAGTAAAAGAACTAATAGAAAAAG
AAAAAGAAAAGGATCTGGACCTGGAGCCTCTGAGTGATCTGGAGGAAGGATTGGAGGAAACCAGAGATACAGCCA
TGGTGGTGGCAGTTTTCAAAGAACGGGAGCAAAAAGAGATTGAAGCCATGCATTCTCTCAGAGCAGCCAACCTAG
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FIGURE 435B

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CCAAGATGACAATGGTGGACCGCATAGAAGAAGTAAAATTTTGCATTTGCCGCAAGACAGCCAGTGGGTTTATGC
TACAGTGTGAGCTCTGCAAAGACTGGTTCCATAACAGCTGTGTTCCTCTTCCTAAATCAAGTTCCCAAAAAAAAG
GATCCAGCTGGCAAGCTAAAGAAGTAAAATTCCTTTGCCCTCTTTGTATGCGGTCTCGAAGGCCCAGGCTAGAGA
CTATTCTGTCACTCCTGGTATCCCTTCAGAAGTTGCCCGTACGGTTGCCTGAAGGAGAGGCCCTGCAGTGTTTGA
CAGAACGTGCTATGAGTTGGCAAGATAGAGCGCGGCAGGCTCTAGCCACAGATGAACTATCCTCTGCCCTGGCCA
AACTATCTGTGTTGAGCCAGCGTATGGTGGAACAGGCGGCTCGAGAAAAAACTGAAAAGATCATCAGTGCAGAAC
TCCAAAAAGCAGCTGCCAATCCAGACTTACAGGGACACTTACCTAGTTTCCAGCAGTCTGCTTTTAACCGGGTGG
TGAGCAGTGTGTCATCTTCTCCTCGACAAACAATGGACTATGATGATGAAGAAACAGACTCTGATGAAGACATTC
GAGAGACATATGGCTACGACATGAAGGACACAGCCAGTGTGAAGTCCTCTAGTAGTCTTGAACCCAATCTTTTTT
GTGATGAAGAGATTCCCATCAAATCCGAGGAGGTGGTGACCCACATGTGGACAGCACCTTCATTTTGTGCAGAGC
ATGCTTATTCTTCTGCTTCTAAGAGTTGTTCTCAAGTATTTTTTGGGAAAGGTTCTAGCACCCCAAGGAAACAAC
CTCGGAAGAGCCCTTTGGTGCCCCGAAGTTTGGAACCTCCAGTGCTGGAGTTGTCACCTGGAGCTAAGGCACAAC
TGGAAGAACTTATGATGGTTGGAGATCTCCTGGAAGTATCTCTGGACGAGACTCAACACATATGGCGGATTTTGC
AGGCCACACACCCACCCTCTGAAGACAGATTCTTGCATATCATGGAGGATGACAGCATGGAAGAGAAACCACTAA
AAGTGAAAGGAAAGGACTCTTCAGAGAAGAAACGGAAACGGAAGCTAGAAAAGGTAGAGCAACTTTTTGGAGAAG
GAAAACAGAAGTCCAAGGAGTTAAAGAAAATGGACAAACCTAGAAAGAAGAAATTAAAATTAGGTGCAGACAAAT
CAAAGAAGCTGAATAAACTGGCCAAGAAACTAGCAAAAGAAGAAGAGAGAAAGAAAAAGAAGGAGAAGGCTGCTG
CAGCCAAAGTTGAACTTGTGAAAGAGAGCACTGAAAAGAAAAGAGAGAAAAAGGTGCTGGACATCCCCTCAAAGT
ATGACTGGTCAGGAGCAGAGGAGTCTGATGATGAGAATGCTGTGTGCGCAGAACCAGACTGCCAAAGGCCCTGCA
AGGACAAGGGAGTTGTATTTGTAACGAAGAAGAGAGAGATAAAAAATATTAGTTTTAAAAGTGTCCTATGTGACT
GCTTTTCTAAAAAGGTAGACTGGGTACAATGTGATGGTGGCTGTGATGAGTGGTTTCATCGGGTTTGTGTGGGTG
TATCTCCAGAAATGGCTGAAAATGAAGATTACATCTGTATAAACTGTGCAAGAAGCAGGGGCCAGTTAGCCCAG
GTCCAGCACCACCTCCTTCCTTCATAATGAGCTACAAACTACCAATGGAGGATCTTAAAGAGACCAGT**TAG**CAGA
TGCTTGGTTAGTTTGGGACATGGGGGGACATGGACCACATTGAGACCTTAGTCATCAAGTAGAGTGGTTTATATC
ACTTGGAATGTTGCTTCTAAAGATGAATGGCCTTCAGAGAAAGTCCCCTTAGTGCTGGCTTCCTCTTTGCATGGA
CTCTGTGGGTTACATTGCTCTATCAACATATCTATGCAGAGGGTGTCTTCTTTGGTACAACAGCCAATATCTCAT
GTCTCCTTTGAGTGTGGTTTACTGCATTAAGGCCAGATGCTTAATTGAGCTCTAGGGTGGCTGGTTAGTATTAAT
ACATTGGTGTGCTAACAGGGCATATAGGATGTGGCTTTTGTCCAGCTGATAGTAGTTAGAGGCTTACAACTTAGG
AGCAGCACCAACTGAAGGTGCTAATTGCTTGGATCTCCTTCATTAGGATAGTTGGAGAGGGATTGGAGTACCACT
TTCTTCCACTGTTACCAGGTACTTAATGCCCTAAAGATACAACTAGGAGTAACAGGGCCAAAGTTATTTCTGTTA
GACGTCAAGGAATGGTATCACAGTCTATTGACCTCAGCGATTGTGCTTGTTTGTGCTAGAAGAACATCCCAAAT
AGGAGAACCTCTCACAAGCTGGGGCAGGTCACCTTATCTTTGTAAGATGAGGATATCATCTAGATCAGAAATCTG
ACTAGATTGGATTCTGAGGAGAAGAACCTACTACAAGGCAAGGAGCCGTTTTTTGGCTTTGAAAAGTCTTGCTGT
CTTGGGTCTACATTTTAGGGAAGAGCAGGTACATGGATCCAGGCTTCTGCCAAAAAAAAAAAGAGAAGAAGATGA
CGAGTATGACCAGTCGTACTATCTTACTGAGCCACAGTGATGCATGCTTTTCGGGGAAAACTTCATTCACAAGTA
TTCCAGACACCAGGCTTCAGGCATGGCCATGAGCAAGACCAGCAAATAACAGCTTTTTCCCTTGCAGCCCTGACC
CCAATGTCTGCTGTTTCCAACACTGGTGATTTCTAACTACGGCCCACAGCAGATGCTGTTGAATAACACCATGGC
TTCATCAGAGGATGTGGGGTTGTAGTACCTCTGGGTGATGAAGTTGTTTTAGCAAATCCATTTTTAAAAAAAAAA
AAAAA
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FIGURE 436

MAGVGPGGYAAEFVPPPECPVFEPSWEEFTDPLSFIGRIRPLAEKTGICKIRPPKDWQPPFACEVKSFRFTPRVQ
RLNELEAMTRVRLDFLDQLAKFWELQGSTLKIPVVERKILDLYALSKIVASKGGFEMVTKEKKWSKVGSRLGYLP
GKGTGSLLKSHYERILYPYELFQSGVSLMGVQMPNLDLKEKVEPEVLSTDTQTSPEPGTRMNILPKRTRRVKTQS
ESGDVSRNTELKKLQIFGAGPKVVGLAMGTKDKEDEVTRRRKVTNRSDAFNMQMRQRKGTLSVNFVDLYVCMFCG
RGNNEDKLLLCDGCDDSYHTFCLIPPLPDVPKGDWRCPKCVAEECSKPREAFGFEQAVREYTLQSFGEMADNFKS
DYFNMPVHMVPTELVEKEFWRLVSSIEEDVIVEYGADISSKDFGSGFPVKDGRRKILPEEEEYALSGWNLNNMPV
LEQSVLAHINVDISGMKVPWLYVGMCFSSFCWHIEDHWSYSINYLHWGEPKTWYGVPSHAAEQLEEVMRELAPEL
FESQPDLLHQLVTIMNPNVLMEHGVPVYRTNQCAGEFVVTFPRAYHSGFNQGYNFAEAVNFCTADWLPIGRQCVN
HYRRLRRHCVFSHEELIFKMAADPECLDVGLAAMVCKELTLMTEEETRLRESVVQMGVLMSEEEVFELVPDDERQ
CSACRTTCFLSALTCSCNPERLVCLYHPTDLCPCPMQKKCLRYRYPLEDLPSLLYGVKVRAQSYDTWVSRVTEAL
SANFNHKKDLIELRVMLEDAEDRKYPENDLFRKLRDAVKEAETCASVAQLLLSKKQKHRQSPDSGRTRTKLTVEE
LKAFVQQLFSLPCVISQARQVKNLLDDVEEFHERAQEAMMDETPDSSKLQMLIDMGSSLYVELPELPRLKQELQQ
ARWLDEVRLTLSDPQQVTLDVMKKLIDSGVGLAPHHAVEKAMAELQELLTVSERWEEKAKVCLQARPRHSVASLE
SIVNEAKNIPAFLPNVLSLKEALQKAREWTAKVEAIQSGSNYAYLEQLESLSAKGRPIPVRLEALPQVESQVAAA
RAWRERTGRTFLKKNSSHTLLQVLSPRTDIGVYGSGKNRRKKVKELIEKEKEKDLDLEPLSDLEEGLEETRDTAM
VVAVFKEREQKEIEAMHSLRAANLAKMTMVDRIEEVKFCICRKTASGFMLQCELCKDWFHNSCVPLPKSSSQKKG
SSWQAKEVKFLCPLCMRSRRPRLETILSLLVSLQKLPVRLPEGEALQCLTERAMSWQDRARQALATDELSSALAK
LSVLSQRMVEQAAREKTEKIISAELQKAAANPDLQGHLPSFQQSAFNRVVSSVSSSPRQTMDYDDEETDSDEDIR
ETYGYDMKDTASVKSSSSLEPNLFCDEEIPIKSEEVVTHMWTAPSFCAEHAYSSASKSCSQVFFGKGSSTPRKQP
RKSPLVPRSLEPPVLELSPGAKAQLEELMMVGDLLEVSLDETQHIWRILQATHPPSEDRFLHIMEDDSMEEKPLK
VKGKDSSEKKRKRKLEKVEQLFGEGKQKSKELKKMDKPRKKKLKLGADKSKKLNKLAKKLAKEEERKKKKEKAAA
AKVELVKESTEKKREKKVLDIPSKYDWSGAEESDDENAVCAEPDCQRPCKDKGVVFVTKKREIKNISFKSVLCDC
FSKKVDWVQCDGGCDEWFHRVCVGVSPEMAENEDYICINCAKKQGPVSPGPAPPPSFIMSYKLPMEDLKETS

FIGURE 437A

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GAAGCGGCGGGCGGGGTGGAGCAGCCAGCTGGGTCCGGGGAGCGCCGCCGCCGCCTCGATGGGGTGTTGAAAAGT
CTCCTCTAGAGCTTTGGAAGGCTGAATGCACTAAACATGAAGAGCTTGAAAGCGAAGTTCAGGAAGAGTGACACC
AATGAGTGGAACAAGAATGATGACCGGCTACTGCAGGCCGTGGAGAATGGAGATGCGGAGAAGGTGGCCTCACTG
CTCGGCAAGAAGGGGGCCAGTGCCACCAAACACGACAGTGAGGGCAAGACCGCTTTCCATCTTGCTGCTGCAAAA
GGACACGTGGAATGCCTCAGGGTCATGATTACACATGGTGTGGATGTGACAGCCCAAGATACTACCGGACACAGC
GCCTTACATCTCGCAGCCAAGAACAGCCACCATGAATGCATCAGGAGGCTGCTTCAGTCTAAATGCCCAGCCGAA
AGTGTCGACAGCTCTGGGAAAACAGCTTTACATTATGCAGCGGCTCAGGGCTGCCTTCAAGCTGTGCAGATTCTC
TGCGAACACAAGAGCCCCATAAACCTCAAAGATTTGGATGGGAATATACCGCTGCTTCTTGCTGTACAAAATGGT
CACAGTGAGATCTGTCACTTTCTCCTGGATCATGGAGCAGATGTCAATTCCAGGAACAAAAGTGGAAGAACTGCT
CTCATGCTGGCCTGTGAGATTGGCAGCTCTAACGCTGTGGAAGCCTTAATTAAAAAGGGTGCAGACCTAAACCTT
GTAGATTCTCTTGGATACAATGCCTTACATTATTCCAAACTCTCAGAAAATGCAGGAATTCAAAGCCTTCTATTA
TCAAAAATCTCTCAGGATGCTGATTTAAAGACCCCAACAAAACCAAAGCAGCATGACCAAGTCTCTAAAATAAGC
TCAGAAAGAAGTGGAACTCCAAAAACACGCAAAGCTCCACCACCTCCTATCAGTCCTACCCAGTTGAGTGATGTC
TCTTCCCCAAGATCAATAACTTCGACTCCACTATCGGGAAAGGAATCGGTATTTTTTGCTGAACCACCCTTCAAG
GCTGAGATCAGTTCTATACGAGAAAACAAAGACAGACTAAGTGACAGTACTACAGGTGCTGATAGCTTATTGGAT
ATAAGTTCTGAAGCTGACCAACAAGATCTTCTCTCTCTATTGCAAGCAAAAGTTGCTTCCCTTACCTTACACAAT
AAGGAGTTACAAGATAAATTACAGGCCAAATCACCCAAGGAGGCGGAAGCAGACCTAAGCTTTGACTCATACCAT
TCCACCCAAACTGACTTGGGCCCATCCCTGGGAAAACCTGGTGAAACCTCTCCCCCAGACTCCAAATCATCTCCA
TCTGTCTTAATACATTCTTTAGGTAAATCCACTACTGACAATGATGTCAGAATTCAGCAACTGCAAGAGATTTTG
CAAGATCTACAGAAGAGATTAGAGAGCTCTGAAGCAGAGAGAAACAGCTACAGGTCGAACTCCAATCCCGAAGG
GCAGAACTGGTATGCTTAAACAACACTGAGATTTCAGAGAACAGCTCTGACCTCAGCCAGAAACTTAAAGAAACT
CAGAGCAAATACGAGGAGGCTATGAAAGAAGTCCTTAGTGTGCAGAAGCAGATGAAACTCGGTCTTGTCTCACCT
GAAAGCATGGATAATTATTCACATTTCCACGAGCTGAGGGTCACGGAAGAGGAAATAAATGTGCTAAAGCAGGAT
CTGCAGAATGCATTAGAAGAAAGTGAAAGAAATAAAGAGAAAGTGAGAGAGTTAGAGGAAAAACTGGTAGAGAGG
GAGAAAGGTACAGTGATTAAGCCACCTGTGGAAGAGTACGAGGAAATGAAAAGTTCATATTGCTCTGTTATTGAG
AATATGAATAAGGAGAAAGCATTTTTGTTTGAGAAATACCAAGAAGCCCAAGAAGAAATCATGAAATTAAAAGAC
ACACTAAAAAGTCAGATGACACAGGAAGCCAGTGATGAAGCTGAGGACATGAAAGAAGCCATGAATAGGATGATA
GATGAACTCAATAAACAGGTGAGCGAGCTGTCACAGCTGTACAAAGAAGCCCAGGCTGAGCTGGAGGATTACAGG
AAGAGGAAATCTCTAGAGGATGTCACAGCTGAATATATCCATAAAGCAGAGCATGAGAAACTGATGCAATTGACA
AACGTGTCCAGGGCTAAAGCAGAAGATGCACTGTCTGAAATGAAGTCTCAGTATTCAAAAGTGTTGAATGAGTTG
ACCCAGCTCAAACAACTGGTGGATGCACAAAAAGAGAACTCTGTCTCTATCACAGAACATTTGCAAGTGATAACC
ACGCTGCGGACTGCAGCAAAAGAGATGGAAGAAAAAATAAGCAATCTTAAGGAACACCTTGCAAGCAAGGAAGTG
GAAGTAGCAAAGCTGGAGAAACAACTCTTAGAAGAGAAAGCTGCTATGACTGATGCAATGGTACCTCGGTCTTCC
TATGAAAAACTCCAGTCATCCTTAGAGAGTGAAGTGAGTGTGTTGGCATCGAAATTAAAGGAATCTGTGAAAGAG
AAAGAGAAGGTCCATTCAGAGGTTGTCCAGATTAGAAGTGAGGTCTCACAGGTGAAAAGAGAAAAGGAAAATATT
CAGACTCTCTTGAAATCCAAAGAGCAAGAAGTAAATGAACTTCTGCAAAAATTCCAGCAAGCTCAGGAAGAACTT
GCAGAAATGAAAAGATACGCTGAGAGCTCTTCAAAACTGGAGGAAGATAAAGATAAAAAGATAAATGAGATGTCG
AAGGAAGTCACCAAATTGAAGGAGGCCTTGAACAGCCTCTCCCAGCTCTCCTACTCAACAAGCTCATCCAAAAGG
CAGAGTCAGCAGCTGGAGGCGCTGCAGCAGCAAGTCAAACAGCTCCAGAACCAGCTGGCGGAATGCAAGAAACAA
CACCAGGAGGTCATATCAGTTTACAGAATGCATCTTCTGTATGCTGTGCAGGGCCAGATGGATGAAGATGTCCAG
AAAGTACTGAAGCAAATCCTTACCATGTGTAAAAACCAGTCTCAAAAGAAGTAAAGTGGATTCCTTGGCAGGACA
CTGCCCCTTGTCATCTGTCTTTGTGTTAGATCCAGAGTTGTCGGCAGCCGCTGCCATTGTTCTCATTCGTGGTAT
GCACTGTGGCCTAGCGTAGCTTCTTCCCTTTCCAAAGGTTTCTGAGGACTTCTCCCAGGAGAAGACTGCCCGCCT
CAGAACTGCTTAGAGACTTCAAACCAGCAGAGGTGAAAGTCCCTGTCATCCCTTCAGATTCCAGAGCTGGGATCA
GCCATGCCCAGAGGTCTGGTCCTGATGCTGGCAGGGGGCCCCCTCCTCCATCCCTGACTGGCTGAGTGGCTTTA
TCACCACCGAGTGATGTGCTGAGGCCTCCTGCAGTGAATGCTCCTTCCATTCCTGTACTCGGGCAGTGCCATTCA
GCACAGGAGAGCTCTTTTTGCCTTTGGCTTTCAATTCCAAAACATGATTTAATTTCTAACTAAATTAGTATGGCA
CTAGTTATGAAGTATCTGCTTAAAACCCTTCATCATGATATCCTGTGGATTTAAAAACTCTAATTCCATGTTTTC
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FIGURE 437B

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TTCCCATCTGCCTTATATATCTCATCACCCTGCTTATCAATATTCAGTTTGATGAGCACTATTAACTAAAATATG
AAACTTAAAAACAAAAGCAAGTTGTCCTTAAAAGTTCTTTTTTTAAGTAAATTGTTGACATACTGCAAATTTTCT
ATGCAAACTTGCCTCCTGCTGTTATCTGTGAAGCTCAGGAAATCCAAACATTTGTGTTTCAACAAGGGACAGTAA
ACTGTGTGTTACAGCCAAAAGAAATGCCTCATAGTTCTTAACCTCAACTTTTGTAGAAGTATTTTTTTCTCTGT
AATATTTTTATTGGCTCATAAAGATGTTTTCATATCTGAACTCCTAAATAAGTGAAATTACAGTAGATTATATTA
ACAAAATACTTTTTAGGTAGCCATGCTTGAGACTTTTTAAAAATATAACTTTTTCCTTAAAGTTTTCAGCTATAG
CAAAAGGTAGTTATGTATGCCAGACCTAATATGAGCTGCCACCAACACCCCTAGAACTTTCAGCCATGGTGTCTT
CAGAATTGTAGCGCATTTCTGAATCTAGCAAATCCTCCTTTTACCCGTTGAATGTTTTGAATGCCCTGACTCTAC
CAGCGCCCATAAATGATCTCTAGAAGGACTGTTAGTACCAATCTGTTTTTCAACTTTGAAGCTAAAAACCCTGAT
ATGGTAATATTATGGTGCATAGCAGAGGTCTCGGAAAAAAAATATTTCTGTTCACTTTACTTTCAGGTTAAAAAT
GTTTCTAACACGCTTGCAACTTCCCTTATGGCATTAATCTTGTTGAGGGAGAGAGACAGAATCCTGGACTCTCCA
AAGTATTTAACTGAAAGTAGGGCCTGCTCTGACAGGGCCCATGTCCCACAAGGCTGCTTGGCCTCAGTGGGTGCT
TGGCTGTGCTGGATGATATGTTGATCTGTATTGGATAAGGACCAATGACAGCAAAGCAAAAATGGCTTTAAAGCT
TGGTGTTACTTTTCTTAAGTTGTTTAATTATAGTTAAGCAATTTCAAAAATGCTCCAAAGAAATGTGAAAGGACC
TTTTGTCACAGCACTTCAGAAAATACACAACAGCCCCTTCTGCCCCCGCACAGAAATGCTGCAGAGTATATAAAA
CTTGAGACATTTTTGTAGGATGCCTGACGAGGTGTAGCCTTTTATCTTGTTTCCGGATGCATATTTATTACGAGT
ACTCTGGTTAAATATTGAAAAGTTATATGCTGTAGTTTTTAGTATTTTGTCTTTGTAATTTACAGAAGTTATTGG
AGAAAATAAACTTGTTTCATTTTGCAAAAAAAAAAAAAAAAAAAAAAAAAA
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FIGURE 438

MKSLKAKFRKSDTNEWNKNDDRLLQAVENGDAEKVASLLGKKGASATKHDSEGKTAFHLAAAKGHVECLRVMITH
GVDVTAQDTTGHSALHLAAKNSHHECIRRLLQSKCPAESVDSSGKTALHYAAAQGCLQAVQILCEHKSPINLKDL
DGNIPLLLAVQNGHSEICHFLLDHGADVNSRNKSGRTALMLACEIGSSNAVEALIKKGADLNLVDSLGYNALHYS
KLSENAGIQSLLLSKISQDADLKTPTKPKQHDQVSKISSERSGTPKTRKAPPPPISPTQLSDVSSPRSITSTPLS
GKESVFFAEPPFKAEISSIRENKDRLSDSTTGADSLLDISSEADQQDLLSLLQAKVASLTLHNKELQDKLQAKSP
KEAEADLSFDSYHSTQTDLGPSLGKPGETSPPDSKSSPSVLIHSLGKSTTDNDVRIQQLQEILQDLQKRLESSEA
ERKQLQVELQSRRAELVCLNNTEISENSSDLSQKLKETQSKYEEAMKEVLSVQKQMKLGLVSPESMDNYSHFHEL
RVTEEEINVLKQDLQNALEESERNKEKVRELEEKLVEREKGTVIKPPVEEYEEMKSSYCSVIENMNKEKAFLFEK
YQEAQEEIMKLKDTLKSQMTQEASDEAEDMKEAMNRMIDELNKQVSELSQLYKEAQAELEDYRKRKSLEDVTAEY
IHKAEHEKLMQLTNVSRAKAEDALSEMKSQYSKVLNELTQLKQLVDAQKENSVSITEHLQVITTLRTAAKEMEEK
ISNLKEHLASKEVEVAKLEKQLLEEKAAMTDAMVPRSSYEKLQSSLESEVSVLASKLKESVKEKEKVHSEVVQIR
SEVSQVKREKENIQTLLKSKEQEVNELLQKFQQAQEELAEMKRYAESSSKLEEDKDKKINEMSKEVTKLKEALNS
LSQLSYSTSSSKRQSQQLEALQQQVKQLQNQLAECKKQHQEVISVYRMHLLYAVQGQMDEDVQKVLKQILTMCKN
QSQKK

FIGURE 439A

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AGTGGGACTCAGCGGGCGTGGAGGTCGCGGCGGACGGAGCGAGCCCTGGGCGAGTGAATTGTGGCTGTGGGTTGA
CGGTGGAGACACCCCCCGGAGAGGCGGAGGGAAGGGAGGCGAGGCTGCACCTGCATGCTTCCCGCCTCCCACTCC
CCAGCGCCCCCGGACCGTGCAGTTCTCTGCAGGACCAGGCCATGGAGCTCGAAGTCCGGCGGGTCCGACAGGCGT
TCCTGTCCGGCCGGTCGCGACCTCTGCGGTTTCGGCTGCAGCAGCTGGAGGCCCTGCGGAGGATGGTGCAGGAGC
GCGAGAAGGATATCCTGACGGCCATCGCCGCCGACCTGTGCAAGAGTGAATTCAATGTGTACAGTCAGGAAGTCA
TTACTGTCCTTGGGGAAATTGATTTTATGCTTGAGAATCTTCCTGAATGGGTTACTGCTAAACCAGTTAAGAAGA
ACGTGCTCACCATGCTGGATGAGGCCTATATTCAGCCACAGCCTCTGGGAGTGGTGCTGATAATCGGAGCTTGGA
ATTACCCCTTCGTTCTCACCATTCAGCCACTGATAGGAGCCATCGCTGCAGGAAATGCTGTGATTATAAAGCCTT
CTGAACTGAGTGAAAATACAGCCAAGATCTTGGCAAAGCTTCTCCCTCAGTATTTAGACCAGGATCTCTATATTG
TTATTAATGGTGGTGTTGAGGAAACCACGGAGCTCCTGAAGCAGCGATTTGACCACATTTTCTATACGGGAAACA
CTGCGGTTGGCAAAATTGTCATGGAAGCTGCTGCCAAGCATCTGACCCCTGTGACTCTTGAACTGGGAGGGAAAA
GTCCATGTTATATTGATAAAGATTGTGACCTGGACATTGTTTGCAGACGCATAACCTGGGGAAAATACATGAATT
GTGGCCAAACCTGCATTGCACCCGACTATATTCTCTGTGAAGCATCCCTCCAAAATCAAATTGTATGGAAGATTA
AGGAAACAGTGAAGGAATTTTATGGAGAAAATATAAAAGAGTCTCCTGATTATGAAAGGATCATCAATCTTCGTC
ATTTTAAGAGGATACTAAGTTTGCTTGAAGGACAAAAGATAGCTTTTGGTGGGGAGACTGATGAGGCCACACGCT
ACATAGCCCCAACAGTACTTACCGATGTTGATCCTAAAACCAAGGTGATGCAAGAAGAAATTTTTGGACCAATTC
TTCCAATAGTGCCTGTGAAAAATGTAGATGAGGCCATAAATTTCATAAATGAACGTGAAAAGCCTCTGGCTCTTT
ATGTATTTTCGCATAACCATAAGCTCATCAAACGGATGATTGATGAGACATCCAGTGGAGGTGTCACAGGCAATG
ACGTCATTATGCACTTCACGCTCAACTCTTTCCCATTGGAGGAGTGGGTTCCAGTGGGATGGGAGCTTATCACG
GAAAACATAGTTTTGATACTTTTTCTCATCAGCGTCCCTGTTTATTAAAAAGTTTAAAGAGAGAAGGTGCTAACA
AACTCAGATATCCTCCCAACAGCCAGTCAAAGGTGGATTGGGGGAAATTTTTTCTCTTGAAACGGTTCAACAAAG
AAAAACTCGGTCTCCTGTTGCTCACTTTCCTGGGTATTGTAGCCGCTGTGCTTGTCAAGGCAGAATATTACTGAA
GAATGATCCTGTTCAACCTCCTAGTGCCTCTACTGAATTATTCCTCTTTTAAATGGTTAATGAACCAATAATTTT
TAAATCATACCAAAAATAGTAAGAAAATATGCAAACACTCTGTGATCAAACTTAAAAGTCATTGCCATTCATCAT
TAATAAAAGTTGCCATTTCAACTACGTCCCAACATTCCCTAATAGGGTATTCAGGGAACCTGTCTTAAATTGTGC
TTATCTAAATCTTGGAACTTTGAGCTAGGGGAGGAGAATGTATTAGACTAAATACAAACTGCGGGGTTGTAAGGG
AGTCTCAGAACCTCACTGAATCCTTCACTCCAGTTAATGGCACTGCTCACTTCCTGCCTCTGCTGCCACCATCAC
TGTGTGAAGCTTTCAAGAGCTTGGTACTTCCCAGGGCTACCGGCAGTCCTCTGTAGTCCAGAGAGGTGAGATTAG
ATCTTCTTGGTTCCCTGTGAGGTTTCAGGCACTAAAACTCTATGTGGGGAAGGGAGGGGTTACTCCTCCTCCAAT
GGGACTCAAGGACTTGACCTCCAGGAGTAGGCCCCTGGTCAGAAGTGCCATCTCACCAGTGGTCTTCATTCTTCC
TCATTCATTCTTTATCATCCTGTGTTCTGTTTAGTTGCAACAATCTCTTGTGACTAATGTCACTCAAAGCATCTT
GTAACCTAGGGCTTCCTGGAAGTTAGTTGCCAAAGTCATGCAAGCATCACCTGTCATTCTTGTGTTGGAGTTATA
GAATTCTACATCTTATAAAACCTAACTGGCATTTAAAAAATACTGTGGCCGGGCGTGGTGGCTCATGCCTGTAAT
CCCAGCACTTTGGGAGGCCGAGGTGGGAGGATTGCTTGAGTCCAGGAATTTGAGACCAGCCTGGACAACACAGTG
AGACCTCATCTCTATCAAAAAATAAAAATTAGCTAGATGTGGTGGCATGAGCCTGTGTTCCCAGCTGCTTAGGAG
GCTGAAGCAGGAGGATTGATTGAGCCTGCGAGGCCAAGGCTGCAGCAGGCTGTGATTGCACCACTGCACTTCAGC
TTGGGCAACAGAGCAAGACCCTGTCTCCGAAACAAATAAAAAATACTGTAATAAAAGTACTTATAAACATACTAA
TCCTCTTTCAGGACCCTAAAGTTGCAGGTTAGTAGGTCTTCAAGGACAAATCTGTAAGTTTCTTTTCTGTAGTGC
AAGTAAAATTTCACTTTTTGAAACTATAGAGAGATCCCTTTCTGATTAGCCTACAGAACTTAAAGTGAGGGAACC
ATTTCCTCTCACAGACAAAGAGGCCTGGGATATTAGGACTTTGGGGTTTGAGAGCATCATGGGCAGACAGATGG
TGGATGGTCTGGACAAGAAGCGAGTAAGCCACTGCGGTTGGTCATACTGAAGGGAATTGATGGCAAGAGGATCCC
CTGAGCAAGTCAGAAGTTACTCTCATCAGTCGTTCATGGTCACAACCTGAGGTACTCTGCTGAGTGGGCAAGGCT
GAAGTAAGAGGCCTGTGGAATGCAGCATTACCTGCTGGACAGAGCAGGGCAGGCAGTTCTATGCCTTGGAGCTCC
TGACTGCAGGGACTCTGTCCCCACACTCAGAAAGACTCAGCTCACTCAATGAGAGAATGTGATTTACTTTATAGA
ACGTATAATCAACTTTGTTGAATAATTTGTTCTATTAAGGCTGTCTAAAATGTGATGTCTTCATCATAGTATGAA
GTGGTTGAAAATTAATAACGAGCCTAGTTTAGGAAAAAGCTGCTTAAAACTGTGGCTCTAAGAGAGTAATCATAAA
ATACCTTAGATAAAATTGCACTATGGAATTTTCATTGAGTATGTTTAAATTATTGGCTTGTCTACTAATACATCT
GCTTCAAAATGAACATATTTCATAAAATTGGCATCAATTTTAATGACGCTCCTGGTATGGAACCTCAGATATACC
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FIGURE 439B

CTATTGGAGACAATCCTTTGATCATAAATTCTCCCCAACTATAAATCATTTTATGTCTTTAAAAAAAAAAAAA

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FIGURE 440

MELEVRRVRQAFLSGRSRPLRFRLQQLEALRRMVQEREKDILTAIAADLCKSEFNVYSQEVITVLGEIDFMLENL
PEWVTAKPVKKNVLTMLDEAYIQPQPLGVVLIIGAWNYPFVLTIQPLIGAIAAGNAVIIKPSELSENTAKILAKL
LPQYLDQDLYIVINGGVEETTELLKQRFDHIFYTGNTAVGKIVMEAAAKHLTPVTLELGGKSPCYIDKDCDLDIV
CRRITWGKYMNCGQTCIAPDYILCEASLQNQIVWKIKETVKEFYGENIKESPDYERIINLRHFKRILSLLEGQKI
AFGGETDEATRYIAPTVLTDVDPKTKVMQEEIFGPILPIVPVKNVDEAINFINEREKPLALYVFSHNHKLIKRMI
DETSSGGVTGNDVIMHFTLNSFPFGGVGSSGMGAYHGKHSFDTFSHQRPCLLKSLKREGANKLRYPPNSQSKVDW
GKFFLLKRFNKEKLGLLLLTFLGIVAAVLVKAEYY

FIGURE 441

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GCGCGCCTTCTCCAGTCCGCGGTGCCATGGCCCCCGCCCGTCTGTTCGCGCTGCTGCTGCTCTTCGTAGGCGGAG
TCGCCGAGTCGATCCGAGAGACTGAGGTCATCGACCCCCAGGACCTCCTAGAAGGCCGATACTTCTCCGGAGCCC
TACCAGACGATGAGGATGTAGTGGGGCCCGGGCAGGAATCTGATGACTTTGAGCTGTCTGGCTCTGGAGATCTGG
ATGACTTGGAAGACTCCATGATCGGCCCTGAAGTTGTCCATCCCTTGGTGCCTCTAGATAACCATATCCCTGAGA
GGGCAGGGTCTGGGAGCCAAGTCCCCACCGAACCCAAGAAACTAGAGGAGAATGAGGTTATCCCCAAGAGAATCT
CACCCGTTGAAGAGAGTGAGGATGTGTCCAACAAGGTGTCAATGTCCAGCACTGTGCAGGGCAGCAACATCTTTG
AGAGAACGGAGGTCCTGGCAGCTCTGATTGTGGGTGGCATCGTGGGCATCCTCTTTGCCGTCTTCCTGATCCTAC
TGCTCATGTACCGTATGAAGAAGAAGGATGAAGGCAGCTATGACCTGGGCAAGAAACCCATCTACAAGAAAGCCC
CCACCAATGAGTTCTACGCGTGAAGCTTGCTTGTGGGCACTGGCTTGGACTTTAGCGGGGAGGGAAGCCAGGGGA
TTTTGAAGGGTGGACATTAGGGTAGGGTGAGGTCAACCTAATACTGACTTGTCAGTATCTCCAGCTCTGATTACC
TTTGAAGTGTTCAGAAGAGACATTGTCTTCTACTGTTCTGCCAGGTTCTTCTTGAGCTTTGGGCCTCAGTTGCCC
TGGCAGAAAAATGGATTCAACTTGGCCTTTCTGAAGGCAAGACTGGGATTGGATCACTTCTTAAACTTCCAGTTA
AGAATCTAGGTCCGCCCTCAAGCCCATACTGACCATGCCTCATCCAGAGCTCCTCTGAAGCCAGGGGGCTAACGG
ATGTTGTGTGGAGTCCTGGCTGGAGGTCCTCCCCCAGTGGCCTTCCTCCCTTCCTTTCACAGCCGGTCTCTCTGC
CAGGAAATGGGGGAAGGAACTAGAACCACCTGCACCTTGAGATGTTTCTGTAAATGGGTACTTGTGATCACACTA
CGGGAATCTCTGTGGTATATACCTGGGGCCATTCTAGGCTCTTTCAAGTGACTTTTGGAAATCAACCTTTTTTAT
TTGGGGGGGGAGGATGGGGAAAAGAGCTGAGAGTTTATGCTGAAATGGATTTATAGAATATTTGTAAATCTATTTT
TAGTGTTTGTTCGTTTTTTTAACTGTTCATTCCTTTGTGCAGAGTGTATATCTCTGCCTGGGCAAGAGTGTGGAG
GTGCCGAGGTGTCTTCATTCTCTCGCACATTTCCACAGCACCTGCTAAGTTTGTATTTAATGGTTTTTGTTTTTG
TTTTTGTTTGTTTCTTGAAAATGAGAGAAGAGCCGGAGAGATGATTTTTATTAATTTTTTTTTTTTTTTTTTTTTT
TACTATTTATAGCTTTAGATAGGGCCTCCCTTCCCCTCTTCTTTCTTTGTTCTCTTTCATTAAACCCCTTCCCCA
GTTTTTTTTTTATACTTTAAACCCCGCTCCTCATGGCCTTGGCCCTTTCTGAAGCTGCTTCCTCTTATAAAATAG
CTTTTGCCGAAACATAGTTTTTTTTTAGCAGATCCCAAAATATAATGAAGGGGATGGTGGGATATTTGTGTCTGT
GTTCTTATAATATATTATTATTCTTCCTTGGTTCTAGAAAAATAGATAAATATATTTTTTTCAGGAAATAGTGTG
GTGTTTCCAGTTTGATGTTGCTGGGTGGTTGAGTGAGTGAATTTTCATGTGGCTGGGTGGGTTTTTGCCTTTTTC
TCTTGCCCTGTTCCTGGTGCCTTCTGATGGGGCTGGAATAGTTGAGGTGGATGGTTCTACCCTTTCTGCCTTCTG
TTTGGGACCCAGCTGGTGTTCTTTGGTTTGCTTTCTTCAGGCTCTAGGGCTGTGCTATCCAATACAGTAACCACA
TGCGGCTGTTTAAAGTTAAGCCAATTAAAATCACATAAGATTAAAAATTCCTTCCTCAGTTGCACTAACCACGTT
TCTAGAGGCGTCACTGTATGTAGTTCATGGCTACTGTACTGACAGCGAGAGCATGTCCATCGTTGGACAGCACT
ATTCTAGAGAACTAAACTGGCTTAACGAGTCACAGCCTCAGCTGTGCTGGGACGACCCTTGTCTCCCTGGGTAGG
GGGGGGGGAATGGGGGAGGGCTGATGAGGCCCCAGCTGGGGCCTGTTGTCTGGGACCCTCCCTCTCCTGAGAGGG
GAGGCCTGGTGGCTTAGCCTGGGCAGGTCGTGTCTCCTCCTGACCCCAGTGGCTGCGGTGAGGGGAACCACCCTC
CCTTGCTGCACCAGTGGCCATTAGCTCCCGTCACCACTGCAACCCAGGGTCCCAGCTGGCTGGGTCCTCTTCTGC
CCCCAGTGCCCTTCCCCTTGGGCTGTGTTGGAGTGAGCACCTCCTCTGTAGGCACCTCTCACACTGTTGTCTGTT
ACTGATTTTTTTTGATAAAAGATAATAAAACCTGGTACTTTCTAAAAAAAAAAAAAAAAAAAA
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FIGURE 442

MAPARLFALLLLFVGGVAESIRETEVIDPQDLLEGRYFSGALPDDEDVVGPGQESDDFELSGSGDLDDLEDSMIG
PEVVHPLVPLDNHIPERAGSGSQVPTEPKKLEENEVIPKRISPVEESEDVSNKVSMSSTVQGSNIFERTEVLAAL
IVGGIVGILFAVFLILLLMYRMKKKDEGSYDLGKKPIYKKAPTNEFYA

FIGURE 443A

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CCTGGTCAGCGTCCCATCCCGGTCGGGAGTTCTCTCCAGGCGGCACGATGCCGAGGAAACAGTGACCCTGAGCGA
ACCAAGCCGGGCGGCAGGTGTGGCTTTGATAGCTGGTGGTGCCACTTCCTGGCCTTGGATGAGCCGTACGCCTCT
GTAAACCCAACTTCCTCACCTTTGAAACAGCTGCCTGGTTCAGCATTAATGAAGATTAGTCAGTGACAGGCCTGG
TGTGCTGAGTCCGCACATAGAAGAATCAAAAATGTCCAAAATGTAACTGGAGAGAAAGTGGGCAACTTTTGGGAG
TGACTTTTCCACAGGAACTTCTGCA**ATG**TCCCATCAACCTCTCAGCTGCCTCACTGAAAAGGAGGACAGCCCCAG
TGAAAGCACAGGAAATGGACCCCCCCACCTGGCCCACCCAAACCTGGACACGTTTACCCCGGAGGAGCTGCTGCA
GCAGATGAAAGAGCTCCTGACCGAGAACCACCAGCTGAAAGAAGCCATGAAGCTAAATAATCAAGCCATGAAAGG
GAGATTTGAGGAGCTTTCGGCCTGGACAGAGAAACAGAAGGAAGAACGCCAGTTTTTTGAGATACAGAGCAAAGA
AGCAAAAGAGCGTCTAATGGCCTTGAGTCATGAGAATGAGAAATTGAAGGAAGAGCTTGGAAAACTAAAAGGGAA
ATCAGAAAGGTCATCTGAGGACCCCACTGATGACTCCAGGCTTCCCAGGGCCGAAGCGGAGCAGGAAAAGGACCA
GCTCAGGACCCAGGTGGTGAGGCTACAAGCAGAGAAGGCAGACCTGTTGGGCATCGTGTCTGAACTGCAGCTCAA
GCTGAACTCCAGCGGCTCCTCAGAAGATTCCTTTGTTGAAATTAGGATGGCTGAAGGAGAAGCAGAAGGGTCAGT
AAAAGAAATCAAGCATAGTCCTGGGCCCACGAGAACAGTCTCCACTGGCACGGCATTGTCTAAATATAGGAGCAG
ATCTGCAGATGGGGCCAAGAATTACTTCGAACATGAGGAGTTAACTGTGAGCCAGCTCCTGCTGTGCCTAAGGGA
AGGGAATCAGAAGGTGGAGAGACTTGAAGTTGCACTCAAGGAGGCCAAAGAAAGAGTTTCAGATTTTGAAAAGAA
AACAAGTAATCGTTCTGAGATTGAAACCCAGACAGAGGGGAGCACAGAGAAAGAGAATGATGAAGAGAAAGGCCC
GGAGACTGTTGGAAGCGAAGTGGAAGCACTGAACCTCCAGGTGACATCTCTGTTTAAGGAGCTTCAAGAGGCTCA
TACAAAACTCAGCGAAGCTGAGCTAATGAAGAAGAGACTTCAAGAAAAGTGTCAGGCCCTTGAAAGGAAAAATTC
TGCAATTCCATCAGAGTTGAATGAAAAGCAAGAGCTTGTTTATACTAACAAAAAGTTAGAGCTACAAGTGGAAAG
CATGCTATCAGAAATCAAAATGGAACAGGCTAAAACAGAGGATGAAAAGTCCAAATTAACTGTGCTACAGATGAC
ACACAACAAGCTTCTTCAAGAACATAATAATGCATTGAAAACAATTGAGGAACTAACAAGAAAAGAGTCAGAAAA
AGTGGACAGGGCAGTGCTGAAGGAACTGAGTGAAAAACTGGAACTGGCAGAGAAGGCTCTGGCTTCCAAACAGCT
GCAAATGGATGAAATGAAGCAAACCATTGCCAAGCAGGAAGAGGACCTGGAAACCATGACCATCCTCAGGGCTCA
GATGGAAGTTTACTGTTCTGATTTTCATGCTGAAAGAGCAGCGAGAGAGAAAATTCATGAGGAAAAGGAGCAACT
GGCATTGCAGCTGGCAGTTCTGCTGAAAGAGAATGATGCTTTCGAAGACGGAGGCAGGCAGTCCTTGATGGAGAT
GCAGAGTCGTCATGGGGCGAGAACAAGTGACTCTGACCAGCAGGCTTACCTTGTTCAAAGAGGAGCTGAGGACAG
GGACTGGCGGCAACAGCGGAATATTCCGATTCATTCCTGCCCCAAGTGTGGAGAGGTTCTGCCTGACATAGACAC
GTTACAGATTCACGTGATGGATTGCATCATT**TAA**GTGTTGATGTATCACCTCCCCAAAACTGTTGGTAAATGTCA
GATTTTTTCCTCCAAGAGTTGTGCTTTTGTGTTATTTGTTTTCACTCAAATATTTTGCCTCATTATTCTTGTTTN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNNN
NNNNNNNNNNNNNNNNNNNNNNNNNNNNAGAAGGAAGGAAGGAGAAGAAAAGGTACCTGTTCTACGTAGAACACCTT
TGGTGGAGTTCCATCAACTCGCAAAGTAGAATCCTTACCTACTACTCTTCTGATAATAATTTTAATATTTTTTAT
GTTTGGTTGATGCGAGCAGCTGCACTGCTCATGCAGTTAGCTAGCATGTGACATCATGTGACAAAGTTCATGTAA
TTAGATGGAAGAAACCTCACTGATTAATTTTAAGAACCTTTTAGGGATGCAGGAACAATGAAGTGGCCACAGTAT
GTGCTGTTTTTGAAGCATTTTTAAAAACGAATTGTAGTTGTTTTTCTTCATTTAAAATGGATCTGTTGGAGGTTA
TGTGTGTATGTTGTAGTTTTATTGCAGCCACAATAATTTTACCAAAGTTTTCACATAGGCAGTTAGCCTTTACTT
AATATCAAGACAAGTGAAAAAATATTGGCATCGATGAAACCGATAACATTGGCCTCATTGGATTTCTTTACCCAT
TCACAGTGTAAAGAAGTTACCTTCATGCTTTCATTGTACCTGCAGGCCTGTGGGCTTGTACAGTAGATAATTAAT
TTCTAAAAGAACAGCTGCCTATTTTCTTCCTAGGTTAGGTTATATCTTCATAATCACAAGAATTAGTGATGGCA
AAATAAAATTTTGCTTATGAATCTTTTACATTGTTTATATATGATTAATATCATCATATATATTTTCTGTATTAA
GCTCATTTGGCTTCATTTAAGCTGTATACTTAGTCATATATCTTTCATTAGTTCTATGGATATGAGCAGATCCCT
TTACTGGAGCCCAGTATGTGCTGTGTGAGTTAGAAGTCATTCTTGCTGAGAAGGTGAATAGGTAGGGATTTGCCT
TGTTTTGTAAGTCTACAATTTGCCAAGAGTAAATAACACTGGACCAGCTGTAAAAGTAAACAGTGTGTTTATGCA
TTGAGATACTAAAGCATTTAAGAAAAAATTAAAAGATCTCTTTTGTTTAAATTTGTCTTAAGAATCTCTCCTAGA
CAAACTTGACTATACACACACACACTTCAATAAGAATCAAAATAGTTCATTATATCTTCATGCCAAGAGAACACA
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FIGURE 443B

TGATACAAATTCAACAGTAATTTCAATTAAACGAGTCCCCTACCACACCTCAGGGAGAATATTTGTTAAAGACAT
TTCTAAAGTAACTCTGACATTTTTACTTTTCTTTGTTATGGTTTCTAATGTAAATTTTTTTCCCTTATCATCTTA
TACTGGAGGAAATATATTTCTATAGTCTCCTAAACAGAGAAGGAAACCAAATGGTTTCACATTTAAAGTTATTGG
ACATAATCCTTTTACTTTGTTCAAGTAAAAATATTCAGCAAAGCCAGACTGAAATAATAACATGAATGGGCTTAT
TAAA

FIGURE 444

MSHQPLSCLTEKEDSPSESTGNGPPHLAHPNLDTFTPEELLQQMKELLTENHQLKEAMKLNNQAMKGRFEELSAW
TEKQKEERQFFEIQSKEAKERLMALSHENEKLKEELGKLKGKSERSSEDPTDDSRLPRAEAEQEKDQLRTQVVRL
QAEKADLLGIVSELQLKLNSSGSSEDSFVEIRMAEGEAEGSVKEIKHSPGPTRTVSTGTALSKYRSRSADGAKNY
FEHEELTVSQLLLCLREGNQKVERLEVALKEAKERVSDFEKKTSNRSEIETQTEGSTEKENDEEKGPETVGSEVE
ALNLQVTSLFKELQEAHTKLSEAELMKKRLQEKCQALERKNSAIPSELNEKQELVYTNKKLELQVESMLSEIKME
QAKTEDEKSKLTVLQMTHNKLLQEHNNALKTIEELTRKESEKVDRAVLKELSEKLELAEKALASKQLQMDEMKQT
IAKQEEDLETMTILRAQMEVYCSDFHAERAAREKIHEEKEQLALQLAVLLKENDAFEDGGRQSLMEMQSRHGART
SDSDQQAYLVQRGAEDRDWRQQRNIPIHSCPKCGEVLPDIDTLQIHVMDCII

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FIGURE 445

GGCACGAGGGGCTGCCCCCTCCGCCACCGCCGCCGCCCGCCGGCAGGTTCCCTGGTCAGCGTCCCATCCCGGTCG
GGAGTTCTCTCCAGGCGGCACGATGCCGAGGAAACAGTGACCCTGAGCGAAGCCAAGCCGGGCGGCAGGAACTTC
TGCA**ATG**TCCCATCAACCTCTCAGCTGCCTCACTGAAAAGGAGGACAGCCCCAGTGAAAGCACAGGAAATGGACC
CCCCCACCTGGCCCACCCAAACCTGGACACGTTTACCCCGGAGGAGCTGCTGCAGCAGATGAAAGAGCTCCTGAC
CGAGAACCACCAGCTGAAAGAAGCCATGAAGCTAAATAATCAAGCCATGAAAGGGAGATTTGAGGAGCTTTCGGC
CTGGACAGAGAAACAGAAGGAAGAACGCCAGTTTTTTGAGATACAGAGCAAAGAAGCAAAAGAGCGTCTAATGGC
CTTGAGTCATGAGAATGAGAAATTGAAGGAAGAGCTTGGAAAACTAAAAGGGAAATCAGAAAGGTCATCTGAGGA
CCCCACTGATGACTCCAGGCTTCCCAGGGCCGAAGCGGAGCAGGAAAAGGACCAGCTCAGGACCCAGGTGGTGAG
GCTACAAGCAGAGAAGGCAGACCTGTTGGGCATCGTGTCTGAACTGCAGCTCAAGCTGAACTCCAGCGGCTCCTC
AGAAGATTCCTTTGTTGAAATTAGGATGGCTGAAGGAGAAGCAGAAGGGTCAGTAAAAGAAATCAAGCATAGTCC
TGGGCCCACGAGAACAGTCTCCACTGGCACGGCATTGTCTAAATATAGGAGCAGATCTGCAGATGGGGCCAAGAA
TTACTTCGAACATGAGGAGTTAACTGTGAGCCAGCTCCTGCTGTGCCTAAGGGAAGGGAATCAGAAGGTGGAGAG
ACTTGAAGTTGCACTCAAGGAGGCCAAAGAAAGAGTTTCAGATTTTGAAAAGAAAACAAGTAATCGTTCTGAGAT
TGAAACCCAGACAGAGGGGAGCACAGAGAAAGAGAATGATGAAGAGAAAGGCCCGGAGACTGTTGGAAGCGAAGT
GGAAGCACTGAACCTCCAGGTGACATCTCTGTTTAAGGAGCTTCAAGAGGCTCATACAAAACTCAGCGAAGCTGA
GCTAATGAAGAAGAGACTTCAAGAAAAGTGTCAGGCCCTTGAAAGGAAAAATTCTGCAATTCCATCAGAGTTGAA
TGAAAAGCAAGAGCTTGTTTATACTAACAAAAAGTTAGAGCTACAAGTGGAAAGCATGCTATCAGAAATCAAAAT
GGAACAGGCTAAAACAGAGGATGAAAAGTCCAAATTAACTGTGCTACAGATGACACACAACAAGCTTCTTCAAGA
ACATAATAATGCATTGAAAACAATTGAGGAACTAACAAGAAAAGAGTCAGAAAAAGTGGACAGGGCAGTGCTGAA
GGAACTGAGTGAAAAACTGGAACTGGCAGAGAAGGCTCTGGCTTCCAAACAGCTGCAAATGGATGAAATGAAGCA
AACCATTGCCAAGCAGGAAGAGGACCTGGAAACCATGACCATCCTCAGGGCTCAGATGGAAGTTTACTGTTCTGA
TTTTCATGCTGAAAGAGCAGCGAGAGAGAAAATTCATGAGGAAAAGGAGCAACTGGCATTGCAGCTGGCAGTTCT
GCTGAAAGAGAATGATGCTTTCGAAGACGGAGGCAGGCAGTCCTTGATGGAGATGCAGAGTCGTCATGGGCGAG
AACAAGTGACTCTGACCAGCAGGCTTACCTTGTTCAAAGAGGAGCTGAGGACAGGGACTGGCGGCAACAGCGGAA
TATTCCGATTCATTCCTGCCCCAAGTGTGGAGAGGTTCTGCCTGACATAGACACGTTACAGATTCACGTGATGGA
TTGCATCATT**TAA**GTGTTGATGTATCACCTCCCCAAAACTGTTGGTAAATGTCAGATTTTTTCCTCCAAGAGTTG
TGCTTTTGTGTTATTTGTTTTCACTCAAATATTTTGCCTCATTATTCTTGTTTTAAAAGAAAGAAAACAGGCCGG
GCACAGTGGCTCATGCCTGTAATCCCAGCACTTTGGGAGGTCGAGGTGGGTGGATCACTTGGGGTCAGGGTTTGA
GACCAGCCTGGCCAACATGGCGGAACCCTGTCTCTACCAAAATTACAAAAATTAGCCGAGCATGGTGGCGCATGC
CTGTAGTCGCAGCTACTCGCGAGGTTGAGGCAGGAGAATTGCTTGAACCCAGGAAGTGGCAGTTGCAGTGAGCCG
AGACGACACCACTGCACTCCAGCCTGGGTGACAGAGGGAGACTCTGTCTCGAAAGAAAAAAAAAAAAAAAAAAAA
AA

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FIGURE 446

MSHQPLSCLTEKEDSPSESTGNGPPHLAHPNLDTFTPEELLQQMKELLTENHQLKEAMKLNNQAMKGRFEELSAW
TEKQKEERQFFEIQSKEAKERLMALSHENEKLKEELGKLKGKSERSSEDPTDDSRLPRAEAEQEKDQLRTQVVRL
QAEKADLLGIVSELQLKLNSSGSSEDSFVEIRMAEGEAEGSVKEIKHSPGSTRTVSTGTALSHYRRRSADGAKNY
FEHEELTVSQLLLCLREGNQKVERLEVALKEAKERVSDFEKKTSNRSEIETQTEGSTEKENDEEKGPETVGSEVE
ALNLQVTSLFKELQEAHTKLSEAELMKKRLQEKCQALERKNSAIPSELNEKQELVYPNKKLELQVESMLSEIKME
QAKTEDEKSKLTVLQMTHNKLLQEHNNALKTIEELTRKESEKVDRAVLKELSEKLELAEKALASKQLQMDEMKQT
IAKQEEDLETMTILRAQMEVYCSDFHAERAAREKIHEEKEQLALQLAVLLKENDAFEDGGRQSLMEMQSRHGART
SDSDQQAYLVQRGAEDRDWRQQRNIPIHSCPKCGEVLPDIDTLQIHVMDCII

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FIGURE 447

GGTTTGTGTAGAGAGGCGTGCAGAGCCCGTTGTCCGGAGTGCACCTGCTGCCTGTTCTGTCCCTCCCGGGAGCCC
CCGCCGCTGTCGCCGTCGAGTCGCC**ATG**GAAGTGCAGAAAGAGGCACAGCGCATCATGACCCTGTCGGTGTGGAA
GATGTATCACTCCCGCATGCAGCGCGGTGGCCTGCGGCTGCACCGGAGTCTGCAGCTGTCGCTGGTCATGCGCAG
CGCCCGGGAGCTCTACCTCTCGGCCAAGGTGGAGGCCCTCGAGCCCGAGGTGTCGTTGCCGGCCGCCCTCCCCTC
TGACCCTCGCCTGCACCCGCCCCGAGAAGCCGAGTCCACGGCCGAGACAGCGACCCCCGACGGTGAGCACCCGTT
TCCGGAGCCAATGGACACGCAGGAGGCGCCGACAGCCGAGGAGACCTCCGCCTGCTGTGCCCCGCGCCCCGCCAA
AGTCAGCCGCAAACGACGCAGCAGCAGCCTGAGCGACGGCGGGGACGTTGGACTGGTCCCGAGCAAGAAAGCCCG
TCTGGAAGAAAAGGAAGAAGAGGAGGGAGCGTCATCCGAAGTCGCCGATCGCCTGCAGCCCCCTCCGGGCCAAGC
GGAGGGCGCCTTTCCCAACCTGGCCCGCGTCCTGCAGAGGCGCTTCTCCGGCCTCCTGAACTGCAGCCCCGCGGC
CCCTCCGACGGCGCCGCCCGCGTGCGAGGCAAAGCCCGCTTGCCGCCCGGCGGACAGCATGCTCAACGTGCTCGT
GCGGGCCGTGGTGGCCTTC**TGA**GGACCCCGAGCGGCGCTGCCGGAGCCCAGAGCGCGCGTCGAACCGTCGGCCCG
AGGGCGCAGACCTGAGGCGAGGCCACCCCCCTCCATCCTGGGGGAAGCGCCCGCGAAAACCGTGGAGAGAAGCCG
CCGCCCGGGCTGCTGAGAGGCCCGGAGAGGACTCTGTCCCCGGGGAGCCATCGCCTTCAGTGTGCAGGGACGGCA
CCGAGGAGTCTGAGCCGGGCGCGGGCGCCTTCCGCAGAGACCTGCGCCCACAGGTGCTGTCTTAGTGGACTGGGA
CGTGAACCTTTCGCTCTCCTTCTGGACTGGGAGAAGGGAGGCTTGGGTGTTGTGTTTTTTGTTTTGTTTGTTTGT
TTGTTTTTAAAGATCTCCTCAGGGTCGGACTTCATTTTGTACTGTGGGCTGTGCTGGCCCTTTCAAGGTTTTTCA
AGAGTTGGTTTTGCGTTTCCAACCTCGGAGAATTCCAGGCACTCCCCTTCCCCCTCCGCTGACATACTTGTATAA
GCGGTCATCGTTGCGTCATGGGGCAGGCGTGGGGAGCTTCCTGTCGCCTTGGCTGGGTGTGGGCCTGGAGGAAGG
TCCTGGGGCGTGCACTCGCCTGGGCAGTGGGGAGGAGAGTGGCCTGAGTTACTTCACCCCCGCGTGCTGCTGGTT
AATGTCCCGCGTCTCTGCACCTTCGGGTGGGAGCGGGGACTGATCTACTTTCACATTCTCAAGTTTTTCTCATCT
GCATTAGAGGTCCCCAGTAGGTTCCCAGGTTCCAGCGTGCCCCTCCCTCAGACACACGGACACAATCAGCCGAGA
AGTTCCTGGTCTGAATCACGAGAATGTGGAGGGGTGGGGGGTGTCAGTGGAAAGGCATAAGGCTGAGCTGAGACC
AGTTGCTGGTGAAACTGGGCCAATCTGGGGAGGGGAACATCCTTGCCAGGGAGTTTCTGAGGGTCTGCTTTGTTT
ACCTTTCGTGCGGTGGATTCTTTTTAACTCCGTCTACCTGGCGTTTTGTTAGAAATGTCAGATAGGAAAATAAAA
ACCATTTGAGT

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FIGURE 448

MEVQKEAQRIMTLSVWKMYHSRMQRGGLRLHRSLQLSLVMRSARELYLSAKVEALEPEVSLPAALPSDPRLHPPR
EAESTAETATPDGEHPFPEPMDTQEAPTAEETSACCAPRPAKVSRKRRSSSLSDGGDVGLVPSKKARLEEKEEEE
GASSEVADRLQPPPGQAEGAFPNLARVLQRRFSGLLNCSPAAPPTAPPACEAKPACRPADSMLNVLVRAVVAF

FIGURE 449

GCCGGCCGAACCCAGACCCGAGGTTTTAGAAGCAGAGTCAGGCGAAGCTGGGCCAGAACCGCGACCTCCGCAACC
TTGAGCGGCATCCGTGGAGTGCGCCTGCGCAGCTACGACCGCAGCAGGAAAGCGCCGCCGGCCAGGCCCAGCTGT
GGCCGGACAGGGACTGGAAGAGAGGACGCGGTCGAGTAGGTGTGCACCAGCCCTGGCAACGAGAGCGTCTACCCC
GAACTCTGCTGGCCTTGAGGTGGGGAAGCCGGGGAGGGCAGTTGAGGACCCCGCGGAGGCGCGTGACTGGTTGAG
CGGGCAGGCCAGCCTCCGAGCCGGGTGGACACAGGTTTTAAAAC**ATG**AATCCTACACTCATCCTTGCTGCCTTTT
GCCTGGGAATTGCCTCAGCTACTCTAACATTTGATCACAGTTTAGAGGCACAGTGGACCAAGTGGAAGGCGATGC
ACAACAGATTATACGGCATGAATGAAGAAGGATGGAGGAGAGCAGTGTGGGAGAAGAACATGAAGATGATTGAAC
TGCACAATCAGGAATACAGGGAAGGGAAACACAGCTTCACAATGGCCATGAACGCCTTTGGAGACATGACCAGTG
AAGAATTCAGGCAGGTGATGAATGGCTTTCAAAACCGTAAGCCCAGGAAGGGGAAAGTGTTCCAGGAACCTCTGT
TTTATGAGGCCCCCAGATCTGTGGATTGGAGAGAGAAAGGCTACGTGACTCCTGTGAAGAATCAGGGTCAGTGTG
GTTCTTGTTGGGCTTTTAGTGCTACTGGTGCTCTTGAAGGACAGATGTTCCGGAAAACTGGGAGGCTTATCTCAC
TGAGTGAGCAGAATCTGGTAGACTGCTCTGGGCCTCAAGGCAATGAAGGCTGCAATGGTGGCCTAATGGATTATG
CTTTCCAGTATGTTCAGGATAATGGAGGCCTGGACTCTGAGGAATCCTATCCATATGAGGCAACAGAAGAATCCT
GTAAGTACAATCCCAAGTATTCTGTTGCTAATGACACCGGCTTTGTGGACATCCCTAAGCAGGAGAAGGCCCTGA
TGAAGGCAGTTGCAACTGTGGGGCCCATTTCTGTTGCTATTGATGCAGGTCATGAGTCCTTCCTGTTCTATAAAG
AAGGCATTTATTTTGAGCCAGACTGTAGCAGTGAAGACATGGATCATGGTGTGCTGGTGGTTGGCTACGGATTTG
AAAGCACAGAATCAGATAACAATAAATATTGGCTGGTGAAGAACAGCTGGGGTGAAGAATGGGGCATGGGTGGCT
ACGTAAAAGATGGCCAAAGACCGGAGAAACCATTGTGGAATTGCCTCAGCAGCCAGCTACCCCACTGTG**TGA**GCTG
GTGGACGGTGATGAGGAAGGACTTGACTGGGGATGGCGCATGCATGGGAGGAATTCATCTTCAGTCTACCAGCCC
CCGCTGTGTCGGATACACACTCGAATCATTGAAGATCCGAGTGTGATTTGAATTCTGTGATATTTTCACACTGGT
AAATGTTACCTCTATTTTAATTACTGCTATAAATAGGTTTATATTATTGATTCACTTACTGACTTTGCATTTTCG
TTTTTAAAAGGATGTATAAATTTTTACCTGTTTAAATAAAATTTAATTTCAAATGTA

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FIGURE 450

MNPTLILAAFCLGIASATLTFDHSLEAQWTKWKAMHNRLYGMNEEGWRRAVWEKNMKMIELHNQEYREGKHSFTM
AMNAFGDMTSEEFRQVMNGFQNRKPRKGKVFQEPLFYEAPRSVDWREKGYVTPVKNQGQCGSCWAFSATGALEGQ
MFRKTGRLISLSEQNLVDCSGPQGNEGCNGGLMDYAFQYVQDNGGLDSEESYPYEATEESCKYNPKYSVANDTGF
VDIPKQEKALMKAVATVGPISVAIDAGHESFLFYKEGIYFEPDCSSEDMDHGVLVVGYGFESTESDNNKYWLVKN
SWGEEWGMGGYVKMAKDRRNHCGIASAASYPTV

FIGURE 451

AATTCCGCGGAATCATCGGAATCCTTCACC**ATG**GCATCCAGCCCGGCCCAGCGTCGGCGAGGCAATGATCCTCTC
ACCTCCAGCCCTGGCCGAAGCTCCCGGCGTACTGATGCCCTCACCTCCAGCCCTGGCCGTGACCTTCCACCATTT
GAGGATGAGTCCGAGGGGCTCCTAGGCACAGAGGGGCCCCTGGAGGAAGAAGAGGATGGAGAGGAGCTCATTGGA
GATGGCATGGAAAGGGACTACCGCGCCATCCCAGAGCTGGACGCCTATGAGGCCGAGGGACTGGCTCTGGATGAT
GAGGACGTAGAGGAGCTGACGGCCAGTCGAAGGGAGGCAGCAGACGGGCCATGCGGCACGGTGACCGGGAGCTGG
CCGGGGCTGGGCGCATGCGCCGTGGGCTCCTGTATGACAGCGATGAGGAGGACGAGGAGCGCCCTGCCCGCAAGC
GCCGCCAGTGGAGCCGGCACGGAGGACGGCGAGGAGGACGAGCAGATGATTGAGAGCATCGAGAACCTGGAGGAT
CTCAAAGGCCACTCTGTGCGCGAGTGGGTGAGCATGGCGGGCCCCCGGCTGGAGATCCACCACCGCTTCAAGAAC
TTCCTGCGCACTCACGTCGACAGCCACGGCCACAACGTCTTCAAGGAGCGCATCAGCGACATGTGCAAAGAGAAC
CGTGAGAGCCTGGTGGTGAACTATGAGGACTTGGCAGCCAGGGAGCACGTGCTGGCCTACTTCCTGCCTGAGGCA
CCGGCGGAGCTGCTGCAGATCTTTGATGAGGCTGCCCTGGAGGTGGTACTGGCCATGTACCCCAAGTACGACCGC
ATCACCAACCACATCCATGTCCGCATCTCCCACCTGCCTCTGGTGGAGGAGCTGCGCTCGCTGAGGCAGCTGCAT
CTGAACCAGCTGATCCGCACCAGTGGGGTGGTGACCAGCTGCACTGGCGTCCTGCCCCAGCTCAGCATGGTCAAG
TACAACTGCAACAAGTGCAATTTCGTCCTGGGTCCTTTCTGCCAGTCCCAGAACCAGGAGGTGAAACCAGGCTCC
TGTCCTGAGTGCCAGTCGGCCGGCCCCTTTGAGGTCAACATGGAGGAGACCATCTATCAGAACTACCAGCGTATC
CGAATCCAGGAGAGTCCAGGCAAAGTGGCGGCTCGGCGGCTGCCCCGCTCCAAGGACGCCATTCTCCTCGCAGAT
CTGGTGGACAGCTGCAACGCAGGAGACGAGATAGAGCTGACTGGCATCTATCACAACAACTATGATGGCTCCCTC
AACACTGCCAATGGCTTCCCTGTCTTTGCCACTGTCATCCTAGCCAACCACGTGGCCAAGAAGGACAACAAGGTT
GCTGTAGGGGAACTGACCGATGAAGATGTGAAGATGATCACTAGCCTCTCCAAGGATCAGCAGATCGGAGAGAAG
ATCTTTGCCAGCATTGCTCCTTCCATCTATGGTCATGAAGACATCAAGAGAGGCCCTGCTCTGGCCCTGTTCGGA
GGGGAGCCCAAAAACCCAGGTGGCAAGCACAAGGTACGTGGTGATATCAACGTGCTCTTGTGCGGAGACCCTGGC
ACAGCGAAGTCGCAGTTTCTCAAGTATATTGAGAAAGTGTCCAGCCGAGCCATCTTCACCACTGGCCAGGGGGCG
TCGGCTGTGGCCGTCACGGCGTATGTCCAGCGGCACCCTGTCAGCAGGGAGTGGACCTTGGAGGCTGGGGCCCTG
GTTCTGGCTGACCGAGGAGTGTGTCTCATTGATGAATTTGACAAGATGAATGACCAGGACAGAACCAGCATCCAT
GAGGCCATGGAGCAACAGAGCATCTCCATCTCGAAGGCTGGCATCGTCACCTCCCTGCAGGCTCGCTGCACGGTC
ATTGCTGCCGCCAACCCCATAGGAGGGCGCTACGACCCCTCGCTGACTTTCTCTGAGAACGTGGACCTCACAGAG
CCCATCATCTCACGCTTTGACATCCTGTGTGTGGTGAGGGACACCGTGGACCCAGTCCAGGACGAGATGCTGGCC
CGCTTCGTGGTGGGCAGCCACGTCAGACACCACCCCAGCAACAAGGAGGAGGAGGGGCTGGCCAATGGCAGCGCT
GCTGAGCCCGCCATGCCCAACACGTATGGCGTGGAGCCCCTGCCCCAGGAGGTCCTGAAGAAGTACATCATCTAC
GCCAAGGAGAGGGTCCACCCGAAGCTCAACCAGATGGACCAGGACAAGGTGGCCAAGATGTACAGTGACCTGAGG
AAAGAATCTATGGCGACAGGCAGCATCCCCATTACGGTGCGGCACATCGAGTCCATGAGTCATGGCGGAGGCCCA
CGCGCGCATCCATCTGCGGGACTATGTGATCGAAGACGACGTCAACATGGCCATCCGCGTGATGCTGGAGAGCTT
CATAGACACACAGAAGTTCAGCGTCATCGCAGCATGCGCAAGACTTTTGCCCGCTACCTTTCATTCCGGCGTGAC
AACAATGAGCTGTTGCTCTTCATACTGAAGCAGTTAGTGGCAGAGCAGGTGACATATCAGCGCAACCGCTTTGGG
GCCCAGCAGGACACTATTGAGGTCCCTGAGAAGGACTTGGTGGATAAGGCTCGTCAGATCAACATCCACAACCTC
TCTGCATTTTATGACAGTGAGCTCTTCAGGATGAACAAGTTCAGCCACGACCTGAAAAGGAAAATGATCCTGCAG
CAGTTC**TGA**GGCCCTATGCCATCCATAAGGATTCCTTGGGATTCTGGTTTGGGGTGGTCAGTGCCCTCTGTGCTT
TATGGACACAAAACCAGAGCACTTGATGAACTCGGGGTACTAGGGTCAGGGCTTATAGCAGGATGTCTGGCTGCA
CCTGGCATGACTGTTTGTTTCTCCAAGCCTGCTTTGTGCTTCTCACCTTTGGGTGGGATGCCTTGCCAGTGTGTC
TTACTTGGTTGCTGAACATCTTGCCACCTCCGAGTGCTTTGTCTCCACTCAGTACCTTGGATCAGAGCTGCTGAG
TTCAGGATGCCTGCGTGTGGTTTAGGTGTTAGCCTTCTTACATGGATGTCAGGAGAGCTGCTGCCCTCTTGGCGT
GAGTTGCGTATTCAGGCTGCTTTTGCTCGCTTTGGCCAGAGAGCTGGTTGAAGATGTTTGTAATCGTTTTCAGTC
TCCTGCAGGTTTCTGTGCCCCTGTGGTGGAAGAGGCACGACAGTGCCAGCGCAGCGTTCTGGGCTCCTCAGTCGC
AGGGGTGGGATGTGAGTCATGCGGATTATCCACTCGCCACAGTTATCAGCTGCCATTGCTCCCTGTCTGTTTCCC
CACTCTCTTATTTGTGCATTCGGTTTGGTTTCTGTAGTTTTAATTTTTAATAAAGTTGAATAAAATATAAAAAAA
AAAA

FIGURE 452

MASSPAQRRRGNDPLTSSPGRSSRRTDALTSSPGRDLPPFEDESEGLLGTEGPLEEEEDGEELIGDGMERDYRAI
PELDAYEAEGLALDDEDVEELTASRREAADGPCGTVTGSWPGLGACAVGSCMTAMRRTRSALPASAASGAGTEDG
EEDEQMIESIENLEDLKGHSVREWVSMAGPRLEIHHRFKNFLRTHVDSHGHNVFKERISDMCKENRESLVVNYED
LAAREHVLAYFLPEAPAELLQIFDEAALEVVLAMYPKYDRITNHIHVRISHLPLVEELRSLRQLHLNQLIRTSGV
VTSCTGVLPQLSMVKYNCNKCNFVLGPFCQSQNQEVKPGSCPECQSAGPFEVNMEETIYQNYQRIRIQESPGKVA
ARRLPRSKDAILLADLVDSCNAGDEIELTGIYHNNYDGSLNTANGFPVFATVILANHVAKKDNKVAVGELTDEDV
KMITSLSKDQQIGEKIFASIAPSIYGHEDIKRGPALALFGGEPKNPGGKHKVRGDINVLLCGDPGTAKSQFLKYI
EKVSSRAIFTTGQGASAVAVTAYVQRHPVSREWTLEAGALVLADRGVCLIDEFDKMNDQDRTSIHEAMEQQSISI
SKAGIVTSLQARCTVIAAANPIGGRYDPSLTFSENVDLTEPIISRFDILCVVRDTVDPVQDEMLARFVVGSHVRH
HPSNKEEEGLANGSAAEPAMPNTYGVEPLPQEVLKKYIIYAKERVHPKLNQMDQDKVAKMYSDLRKESMATGSIP
IIVRHIESMSHGGGPRAHPSAGLCDRRRRQHGHPRDAGELHRHTEVQRHRSMRKTFARYLSFRRDNNELLLFILK
QLVAEQVTYQRNRFGAQQDTIEVPEKDLVDKARQINIHNLSAFYDSELFRMNKFSHDLKRKMILQQF

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FIGURE 453

CCGGTGCCGGGCGAAC**ATG**GCGGCGGCCACCGGACCCTCGTTTTGGCTGGGGAATGAAACCCTGAAGGTGCCGCT
GGCGCTCTTTGCCTTGAACCGGCAGCGCCTGTGTGAGCGGCTGCGGAAGAACCCTGCTGTGCAGGCCGGCTCCAT
CGTGGTCCTGCAGGGCGGGGAGGAGACTCAGCGCTACTGCACCGACACCGGGGTCCTCTTCCTCCAGGAGTCCTT
CTTTCACTGGGCGTTCGGTGTCACTGAGCCAGGCTGCTATGGTGTCATCGATGTTGACACTGGGAAGTCGACCCT
GTTTGTGCCCAGGCTTCCTGCCAGCCATGCCACCTGGATGGGAAAGATCCATTCCAAGGAGCACTTCAAGGAGAA
GTATGCCGTGGACGACGTCCAGTACGTAGATGAGATTGCCAGCGTCCTGACGTCACAGAAGCCCTCTGTCCTCCT
CACTTTGCGTGGCGTCAACACGGACAGCGGCAGTGTCTGCAGGGAGGCCTCCTTTGACGGCATCAGCAAGTTCGA
AGTCAACAATACCATTCTTCACCCAGAGATCGTTGAGAGCCGAGTGTTTAAGACGGATATGGAGCTGGAGGTTCT
GCGCTATACCAATAAAATCTCCAGCGAGGCCCACCGTGAGGTAATGAAGGCTGTAAAAGTGGGAATGAAAGAATA
TGGGTTGGAAAGCCTCTTCGAGCACTACTGCTACTCCCGGGGCGGCATGCGCCACAGCTCCTACACCTGCATCTG
CGGCAGTGGTGAGAACTCAGCCGTGCTACACTACGGACACGCCGGAGCTCCCAACGACCGAACGATCCAGAATGG
GGATATGTGCCTGTTCGACATGGGCGGTGAGTATTACTCTGTCGCTTCCGACATCACCTGCTCCTTTCCCCGCAA
CGGCAAGTTCACTGCAGACCAGAAGGCCGTCTATGAGGCAGTGCTGCTGAGCTCCCGTGCCGTCATGGGTGCCAT
GAAGCCAGGTGACTGGTGGCCTGACATCGACCGCCTGGCTGACCGCATCCACCTGGAGGAGCTGGCCCACATGGG
CATCCTGAGCGGCAGCGTGGACGCCATGGTCCAGGCTCACCTGGGGGCCGTGTTTATGCCTCACGGGCTTGGCCA
CTTCCTGGGCATTGACGTGCACGACGTGGGAGGCTACCCAGAGGGCGTGGAGCGCATCGACGAGCCCGGCCTGCG
GAGCCTGCGCACTGCACGGCACCTGCAGCCAGGCATGGTGCTCACCGTGGAGCCGGGCATCTACTTCATCGACCA
CCTCCTGGATGAGGCCCTGGCGGACCCGGCCCGCGCCTCCTTCCTTAACCGCGAGGTCCTGCAGCGCTTTCGCGG
TTTTGGCGGGGTCCGCATCGAGGAGGACGTCGTGGTGATCGACAGCGGCATAGAGCTGCTGACCTGCGTGCCCCG
CACTGTGGAAGAGATTGAAGCATGCATGGCAGGCTGTGACAAGGCCTTTACCCCCTTCTCTGGCCCCAAG**TAG**AG
CCAGCCAGAAATCCCAGCGCACCTGGGGGCCTGGCCTTGCAACCTCTTTTCGTGATGGGCAGCCTGCTGGTCAGC
ACTCCAGTAGCGAGAGACGGCACCCAGAATCAGATCCCAGCTTCGGCATTTGATCAGACCAAACAGTGCTGTTTC
CCGGGGGAGGAAACACTTTTTTAATTACCCTTTTGCAGGCACCACCTTTAATCTGTTTTATACCTTGCTTATTAAA
TGAGCGACTTAAAATGATTGAAATAATGCTGTCCTTTAGTAGCAAGTAAAATGTGTCTTGCTGTCATTTATATT
CCTTTTCCCAGGAAAGAAGCATTTCTGATACTTTCTGTCAAAAATCAATATGCAGAATGGCATTTGCAATAAAAG
GTTTCCTAAAATG

FIGURE 454

MAAATGPSFWLGNETLKVPLALFALNRQRLCERLRKNPAVQAGSIVVLQGGEETQRYCTDTGVLFLQESFFHWAF
GVTEPGCYGVIDVDTGKSTLFVPRLPASHATWMGKIHSKEHFKEKYAVDDVQYVDEIASVLTSQKPSVLLTLRGV
NTDSGSVCREASFDGISKFEVNNTILHPEIVESRVFKTDMELEVLRYTNKISSEAHREVMKAVKVGMKEYGLESL
FEHYCYSRGGMRHSSYTCICGSGENSAVLHYGHAGAPNDRTIQNGDMCLFDMGGEYYSVASDITCSFPRNGKFTA
DQKAVYEAVLLSSRAVMGAMKPGDWWPDIDRLADRIHLEELAHMGILSGSVDAMVQAHLGAVFMPHGLGHFLGID
VHDVGGYPEGVERIDEPGLRSLRTARHLQPGMVLTVEPGIYFIDHLLDEALADPARASFLNREVLQRFRGFGGVR
IEEDVVVIDSGIELLTCVPRTVEEIEACMAGCDKAFTPFSGPK

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FIGURE 455A

GTGATAACCCCCGTGAGGACAGGCCATGGCTACGTATACGAGTACCCATCCAGATACCAAAAGGACGTCTATGAT
ATCCCTCCTTCTCATACCACTCAAGGGGTATACGACATCCCTCCCTCATCAGCAAAAGGCCCTGTGTTTTCAGTT
CCAGTGGGAGAGATAAAACCTCAAGGGGTGTATGACATCCCGCCTACAAAAGGGGTATATGCCATTCCGCCCTCT
GCTTGCCGGGATGAAGCAGGGCTTAGGGAAAAAGACTATGACTTCCCCCCTCCCATGAGACAAGCTGGAAGGCCG
GACCTCAGACCGGAGGGGGGTTTATGACATTCCTCCAACCTGCACCAAGCCAGCAGGGAAGGACCTTCATGTAAAA
TACAACTGTGACATTCCAGGAGCTGCAGAACCGGTGGCTCGAAGGCACCAGAGCCTGTCCCCGAATCACCCACCC
CCGCAACTCGGACAGTCAGTGGGCTCTCAGAACGACGCATATGATGTCCCCCGAGGCGTTCAGTTTCTTGAGCCA
CCAGCAGAAACCAGTGAGAAAGCAAACCCCCAGGAAAGGGATGGTGTTTATGATGTCCCTCTGCATAACCCGCCA
GATGCTAAAGGCTCTCGGGACTTGGTGGATGGGATCAACCGATTGTCTTTCTCCAGTACAGGCAGCACCCGGAGT
AACATGTCCACGTCTTCCACCTCCTCCAAGGAGTCCTCACTGTCAGCCTCCCCAGCTCAGGACAAAAGGCTCTTC
CTGGATCCAGACACAGCTATTGAGAGACTTCAGCGGCTCCAGCAGGCCCTTGAGATGGGTGTCTCCAGCCTAATG
GCACTGGTCACTACCGACTGGCGGTGTTACGGATATATGGAAAGACACATCAATGAAATACGCACAGCAGTGGAC
AAGGTGGAGCTGTTCCTGAAGGAGTACCTCCACTTTGTCAAGGGAGCTGTTGCAAATGCTGCCTGCCTCCCGGAA
CTCATCCTCCACAACAAGATGAAGCGGGAGCTGCAACGAGTTGAAGACTCCCACCAGATCCTGAGTCAAACCAGC
CATGACTTAAATGAGTGCAGCTGGTCCCTGAATATCTTGGCCATCAACAAGCCCCAGAACAAGTGTGACGATCTG
GACCGGTTTGTGATGGTGGCAAAGACGGTGCCCGATGACGCCAAGCAGCTCACCACAACCATCAACACCAACGCA
GAGGCCCTCTTCAGACCCGGCCCTGGCAGCTTGCATCTGAAGAATGGGCCGGAGAGCATCATGAACTCAACGGAG
TACCCACACGGTGGCTCCCAGGGACAGCTGCTGCATCCTGGTGACCACAAGGCCCAGGCCCACAACAAGGCACTG
CCCCCAGGCCTGAGCAAGGAGCAGGCCCCTGACTGTAGCAGCAGTGATGGTTCTGAGAGGAGCTGGATGGATGAC
TACGATTACGTCCACCTACAGGGTAAGGAGGAGTTTGAGAGGCAACAGAAAGAGCTATTGGAAAAAGAGAATATC
ATGAAACAGAACAAGATGCAGCTGGAACATCATCAGCTGAGCCAGTTCAGCTGTTGGAACAAGAGATTACAAAG
CCCGTGGAGAATGACATCTCGAAGTGGAAGCCCTCTCAGAGCCTACCCACCACAAACAGTGGCGTGAGTGCTCAG
GATCGGCAGTTGCTGTGCTTCTACTATGACCAATGTGAGACCCATTTCATTTCCCTTCTCAACGCCATTGACGCA
CTCTTCAGTTGTGTCAGCTCAGCCCAGCCCCCGCGAATCTTCGTGGCACACAGCAAGTTTGTCATCCTCAGTGCA
CACAAACTGGTGTTCATTGGAGACACGCTGACACGGCAGGTGACTGCCCAGGACATTCGCAACAAAGTCATGAAC
TCCAGCAACCAGCTCTGCGAGCAGCTCAAGACCATAGTCATGGCAACCAAGATGGCCGCCCTCCATTACCCCAGC
ACCACGGCCCTGCAGGAAATGGTGCACCAAGTGACAGACCTTTCTAGAAATGCCCAGCTGTTCAAGCGCTCTTTG
CTGGAGATGGCAACGTTC**TGA**GAAGAAAAAAAGAGGAAGGGGACTGCGTTAACGGTTACTAAGGAAAACTGGAA
ATACTGTCTGGTTTTTGTAAATGTTATCTATTTTTGTAGATATTTTATATAAAAATGAAATATTTTAACATTTTA
TGGGTCAGTCAACTTTCAGAAATTCAGGGAGCTGGAGAGGGAAATCTTTTTTTTTCCCCCTGAGTGGTTCTTATG
TATACATAGAAGTATCTGAGACATAAACTGTACAGAAAACTTGTCCACGTGCTTTTGTATGCCCATGTATTCATG
TTTGTTTGTAGATGTTTGTCTGATGCATTTCATTAAAAAAAAAACCATGAATTACGAAGCACCTTAGTAAGCACC
TTCTAATGCTGCATTTTTTTTGTTGTTGTTAAAAACATACCAGCTGGTTATAATATTGTTCTCCACGTCCTTGTG
ATGATTCTGAGCCTGGCACTCCCAAATCTGGGAAGCATAGTTTATTTGCAAGTGTTCACCTTCCAAATCATGAGG
CATAGCATGACTTATTCTTGTTTGGAAAACTCTTTTCAAAACTGACCATCTTAAACACATGATGGCCAAGTGCCC
AAAAGCCCTCTTGCGGAGCAAATTTCAGAATATATATGTGGATCCAAGCTCTGATAGTTCAGGTGCTGGAGGGAA
GAGAGACCTGTGTGTTTAGAGGCCAGGACCACAGTTAGGATTGGGTTGTTTCAATACTGAGAGACAGCTACAATA
AAAGGAGAGCAATTGCCTCCCTGGGGCTGTTCAATCTTCTGCATTTGTGAGTGGTTCAGTCATGAGGTTTTCCAA
AAGATGTTTTTAGAGTTGTAAAAACCATATTTGCAGCAAAGATTTACAAAGGCGTATCAGACTATGATTGTTCAC
CAAAATAGGGGAATGGTTTGATCCGCCAGTTGCAAGTAGAGGCCTTTCTGACTCTTAATATTCACTTTGGTGCTA
CTACCCCCATTACCTGAGGGAAACTGGCCAGGTCCTTGATCATGGAACTATAGAGCTACCAGGACATATCCTGCT
CTCTAAGGGAATTTATTGCTATCTTGCACCTTCTTTAAAACTCACATATGCAGACCTGACACTCAAGAGTGGCTA
GCTACACAGAGTCCATCTAATTTTTGCAACTTCCTGTGGCCAGTGTGTATAACCCCTTCCACTATCTCACAGATA
GTCACAGCGTCCATTCCATAGTCTGTCTCCTCACATCTGTTAGTATTGACACAGCACAGACACCACAAGCCATCA
GGTTCTTCATGGGGCAGGTGAAATACTTCTACCCCATGGGTAAATGTATTCACATATTACCAAGAGAAGAAGCAC
ATTATCTATGATCTTTTGGCCCAGTTCTTATTTAGCATTTTTATTCCAGCCTACTTGGAAACATGTTTTTATTTG
CAATATATGCCTGACTGAATTAAGCTTGCTTGTTTTAAACAACCAAATCATTGGAACAGAAAAGGATTTAAAAAA
CAAGAATGCATGATCTCAGAGTGATTAAAAAAAAATCAGTGGAAATAAATGATCATAGAAGGTGCTTTTCAAAAC

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FIGURE 455B

AACTGCTATTATAATTCTCAAAGTCCTACTCTGCCAAAAGAAGATTAAAAGTCATACATTACATTACAAGGAAAT
GTTCATGTGGGAAGAGGGTTGCTGAAAATCAACAACGCTTGAAGTTAAAAAGTGTGTCTTTGTAGATTTCATTGT
ATAATGTGTATTTCTTAGGAGATGGCTGACTTGATTGATCTACGCTAAGTGGAGACATTTCACATTTTTAAAACC
AAATGTTCAATCTGTATTACTCTTTGCCGTCTTGTATGTAGAGGCTATTTTTAAATCATTAAATTTTTAGATCTC
TGTTTTCATA

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FIGURE 456

VITPVRTGHGYVYEYPSRYQKDVYDIPPSHTTQGVYDIPPSSAKGPVFSVPVGEIKPQGVYDIPPTKGVYAIPPS
ACRDEAGLREKDYDFPPPMRQAGRPDLRPEGVYDIPPTCTKPAGKDLHVKYNCDIPGAAEPVARRHQSLSPNHPP
PQLGQSVGSQNDAYDVPRGVQFLEPPAETSEKANPQERDGVYDVPLHNPPDAKGSRDLVDGINRLSFSSTGSTRS
NMSTSSTSSKESSLSASPAQDKRLFLDPDTAIERLQRLQQALEMGVSSLMALVTTDWRCYGYMERHINEIRTAVD
KVELFLKEYLHFVKGAVANAACLPELILHNKMKRELQRVEDSHQILSQTSHDLNECSWSLNILAINKPQNKCDDL
DRFVMVAKTVPDDAKQLTTTINTNAEALFRPGPGSLHLKNGPESIMNSTEYPHGGSQGQLLHPGDHKAQAHNKAL
PPGLSKEQAPDCSSSDGSERSWMDDYDYVHLQGKEEFERQQKELLEKENIMKQNKMQLEHHQLSQFQLLEQEITK
PVENDISKWKPSQSLPTTNSGVSAQDRQLLCFYYDQCETHFISLLNAIDALFSCVSSAQPPRIFVAHSKFVILSA
HKLVFIGDTLTRQVTAQDIRNKVMNSSNQLCEQLKTIVMATKMAALHYPSTTALQEMVHQVTDLSRNAQLFKRSL
LEMATF

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FIGURE 457

CGCAGGGACCGTGCTCCGCCGTCTCCGCCGCATCTTCCACCCTCGCCGCCGCCGCAGCTCCCCGCGCTCGTGCCA
CCGCCGCCGCGTCCACCCTCAGCGCCACCGCC**ATG**CGGGAGATCGTGCACCTGCAGGCCGGCCAGTGCGGCAACC
AGATCGGGGCCAAGTTTTGGGAGGTTATCAGTGACGAACATGGCATCGACCCCACAGGCACATACCATGGGGACA
GTGACCTGCAACTGGAGAGGATCAACGTGTACTACAACGAGGCCACAGGAGGAAATTATGTCCCCAGAGCGGTGC
TGGTGGACCTGGAACCCGGCACCATGGACTCTGTCCGTTCTGGCCCCTTCGGTCAGATCTTTCGGCCGGACAACT
TCGTGTTTGGCCAATCCGGAGCCGGCAACAACTGGGCAAAGGGGCACTACACGGAGGGCGCAGAGCTGGTGGACG
CTGTCCTGGACGTAGTCCGGAAGGAGGCCGAGAGCTGCGACTGCCTTCAGGGCTTCCAGCTGACCCACTCGCTGG
GGGGTGGCACGGGGTCCGGAATGGGCACGCTGCTCATCAGTAAGATCCGCGAGGAGTTCCCAGACCGCATCATGA
ACACCTTCAGCGTGGTGCCCTCGCCCAAAGTGTCAGACACGGTGGTGGAGCCCTACAACGCCACGCTGTCTGTGC
ACCAGCTGGTGGAGAATACGGATGAGACCTACTGCATCGACAACGAGGCACTCTACGACATCTGTTTCCGCACCC
TCAAGCTGACCACCCCCACCTACGGGGACCTCAACCACCTGGTGTCGGCCACCATGAGCGGGGTCACCACCTGCC
TGCGCTTCCCGGGCCAGCTGAACGCCGACCTGCGCAAGCTGGCCGTCAACATGGTTCCCTTTCCTCGCCTGCACT
TCTTCATGCCCGGCTTCGCACCCCTGACCAGCCGGGGCAGCCAGCAGTACCGGGCCCTGACGGTGCCCGAGCTCA
CCCAGCAGATGTTCGATGCCAAGAACATGATGGCGGCGTGCGACCCGCGCCACGGCCGCTACCTGACCGTGGCCG
CCGTGTTCCGGGGCCGCATGTCCATGAAGGAGGTGGACGAGCAGATGCTGAGCGTGCAGAGCAAGAACAGCAGCT
ACTTCGTGGAGTGGATCCCCAACAACGTGAAGACGGCCGTGTGCGACATCCCGCCCCGCGGCCTGAAGATGGCCG
CGACCTTCATCGGCAACAGCACGGCCATCCAGGAGCTGTTCAAGCGCATCTCCGAGCAGTTCACGGCCATGTTCC
GGCGCAAGGCCTTCTTGCACTGGTACACGGGCGAGGGCATGGACGAGATGGAGTTCACCGAGGCCGAGAGCAACA
TGAATGACCTGGTATCTGAGTACCAGCAGTACCAGGACGCCACGGCCGAGGAGGGCGAGTTCGAGGAGGAGGCGG
AGGAGGAGGTGGCC**TAG**GCTGCTCCCATCGCTTCCCACCTGTCCCCTCGAGGCTTCTGACCTTTGATCCGCTAGG
CCCCCCATCTCTGAACCCTAGAGCCCCGCTTTCCCTCCAAGGCTGACTCCCCGCTGACCCTAACAATACCTTTGG
AGCTCGCTTTACCTCTGGCTACTTCATCTCCGACCCTGGCTCCCCTTTGAGCCCTAATTTATCTTTAACCCCCTT
GAGCTCTTCCAACCTTGACATTCCCAGGAGGAGCCCCGCTTCACCCCTTCTGACTCTGGAAACCGCACCTTTAAC
TTTGCAGACCTTCCTTCACCCCTGACTTCTGCTTCACCTTTGACCTCTGCCCCCCATGAATCCCATTTTACCTCT
AGACCTATAAGTTCTGGTTTATGTTTGACCCCTCCCTCTGAGCTGCACTTCACCGCTGACCTTGCCTCACCTTTA
ACCCCCCACCTGAGCCCCAGCTCCTACCTCTGACCCCAACTTCTCTTTGATCTCTGAATCCCTCTGACTCCAAC
TTCTCTTTCACCCTCTATGAGTCCCATTTTACTTCTACACCTGCAAGTCCTGGTTTATATTGGACCCCTCCCTCC
GAGCTGCAGTTCACCTTTGACCTTGCCTCACCTTTCACCCCCCACCCCCCACAGCGTCAGCTCCTACCTCTGACC
CCAGCTTCTCTCTGATTCCCACAGGCCCCATGCATCCTCCCTGCCTCACTCCCCTCAGCCCCTGCCGACCTTAGC
TTATCTGGGAGAGAAACAAGGCCTGGTGCCTGTGAGGAAGAGAGGTCACCCCTACCCTCCCTCCCCGCTTCCCTG
CCTCACCCTCAATAAATAAATTAATTGTTGTCATGGAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 458

MREIVHLQAGQCGNQIGAKFWEVISDEHGIDPTGTYHGDSDLQLERINVYYNEATGGNYVPRAVLVDLEPGTMDS
VRSGPFGQIFRPDNFVFGQSGAGNNWAKGHYTEGAELVDAVLDVVRKEAESCDCLQGFQLTHSLGGGTGSGMGTL
LISKIREEFPDRIMNTFSVVPSPKVSDTVVEPYNATLSVHQLVENTDETYCIDNEALYDICFRTLKLTTPTYGDL
NHLVSATMSGVTTCLRFPGQLNADLRKLAVNMVPFPRLHFFMPGFAPLTSRGSQQYRALTVPELTQQMFDAKNMM
AACDPRHGRYLTVAAVFRGRMSMKEVDEQMLSVQSKNSSYFVEWIPNNVKTAVCDIPPRGLKMAATFIGNSTAIQ
ELFKRISEQFTAMFRRKAFLHWYTGEGMDEMEFTEAESNMNDLVSEYQQYQDATAEEGEFEEEAEEEVA

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FIGURE 459A

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TGAGGAATCAACAGCCGCCATCTTGTCGCGGACCCGACCGGGGCTTCGAGCGCGATCTACTCGGCCCCGCCGGTC
CCGGGCCCCACAACCGCCCGCGCTCGCTCCTCTCCCTCGCAGCCGGCAGGGCCCCCGACCCCCGTCCGGGCCCTC
GCCGGCCCCGGCCGCCCGTGCCCGGGGCTGTTTTCGCGAGCAGGTGAAAATGGCTGAGAACTTGCTGGACGGACCG
CCCAACCCCAAAAGAGCCAAACTCAGCTCGCCCGGTTTCTCGGCGAATGACAGCACAGATTTTGGATCATTGTTT
GACTTGGAAAATGATCTTCCTGATGAGCTGATACCCAATGGAGGAGAATTAGGCCTTTTAAACAGTGGGAACCTT
GTTCCAGATGCTGCTTCCAAACATAAACAACTGTCGGAGCTTCTACGAGGAGGCAGCGGCTCTAGTATCAACCCA
GGAATAGGAAATGTGAGCGCCAGCAGCCCCGTGCAGCAGGGCCTGGGTGGCCAGGCTCAAGGGCAGCCGAACAGT
GCTAACATGGCCAGCCTCAGTGCCATGGGCAAGAGCCCTCTGAGCCAGGGAGATTCTTCAGCCCCCAGCCTGCCT
AAACAGGCAGCCAGCACCTCTGGGCCCACCCCGCTGCCTCCCAAGCACTGAATCCGCAAGCACAAAAGCAAGTG
GGGCTGGCGACTAGCAGCCCTGCCACGTCACAGACTGGACCTGGTATCTGCATGAATGCTAACTTTAACCAGACC
CACCCAGGCCTCCTCAATAGTAACTCTGGCCATAGCTTAATTAATCAGGCTTCACAAGGGCAGGCGCAAGTCATG
AATGGATCTCTTGGGGCTGCTGGCAGAGGAAGGGGAGCTGGAATGCCGTACCCTACTCCAGCCATGCAGGGCGCC
TCGAGCAGCGTGCTGGCTGAGACCCTAACGCAGGTTTCCCCGCAAATGACTGGTCACGCGGGACTGAACACCGCA
CAGGCAGGAGGCATGGCCAAGATGGGAATAACTGGGAACACAAGTCCATTGGACAGCCCTTTAGTCAAGCTGGA
GGGCAGCCAATGGGAGCCACTGGAGTGAACCCCCAGTTAGCCAGCAAACAGAGCATGGTCAACAGTTTGCCCACC
TTCCCTACAGATATCAAGAATACTTCAGTCACCAACGTGCCAAATATGTCTCAGATGCAAACATCAGTGGGAATT
GTACCCACACAAGCAATTGCAACAGGCCCCACTGCAGATCCTGAAAAACGCAAACTGATACAGCAGCAGCTGGTT
CTACTGCTTCATGCTCATAAGTGTCAGAGACGAGAGCAAGCAAACGGAGAGGTTCGGGCCTGCTCGCTCCCGCAT
TGTCGAACCATGAAAAACGTTTTGAATCACATGACGCATTGTCAGGCTGGGAAAGCCTGCCAAGTTGCCCATTGT
GCATCTTCACGACAAATCATCTCTCATTGGAAGAACTGCACACGACATGACTGTCCTGTTTGCCTCCCTTTGAAA
AATGCCAGTGACAAGCGAAACCAACAAACCATCCTGGGGTCTCCAGCTAGTGGAATTCAAAACACAATTGGTTCT
GTTGGCACAGGGCAACAGAATGCCACTTCTTTAAGTAACCCAAATCCCATAGACCCCAGCTCCATGCAGCGAGCC
TATGCTGCTCTCGGACTCCCCTACATGAACCAGCCCCAGACGCAGCTGCAGCCTCAGGTTCCTGGCCAGCAACCA
GCACAGCCTCAAACCCACCAGCAGATGAGGACTCTCAACCCCCTGGGAAATAATCCAATGAACATTCCAGCAGGA
GGAATAACAACAGATCAGCAGCCCCCAAACTTGATTTCAGAATCAGCTCTTCCGACTTCCCTGGGGGCCACAAAC
CCACTGATGAACGATGGCTCCAACTCTGGTAACATTGGAACCCTCAGCACTATACCAACAGCAGCTCCTCCTTCT
AGCACCGGTGTAAGGAAAGGCTGGCACGAACATGTCACTCAGGACCTGCGGAGCCATCTAGTGCATAAACTCGTC
CAAGCCATCTTCCCAACACCTGATCCCGCAGCTCTAAAGGATCGCCGCATGGAAAACCTGGTAGCCTATGCTAAG
AAAGTGGAAGGGGACATGTACGAGTCTGCCAACAGCAGGGATGAATATTATCACTTATTAGCAGAGAAATCTAC
AAGATACAAAAAGAACTAGAAGAAAAACGGAGGTCGCGTTTACATAAACAAGGCATCTTGGGGAACCAGCCAGCC
TTACCAGCCCCGGGGGCTCAGCCCCCTGTGATTCCACAGGCACAACCTGTGAGACCTCCAAATGGACCCCTGTCC
CTGCCAGTGAATCGCATGCAAGTTTCTCAAGGGATGAATTCATTTAACCCCATGTCCTTGGGGAACGTCCAGTTG
CCACAAGCACCCATGGGACCTCGTGCAGCCTCCCCAATGAACCACTCTGTCCAGATGAACAGCATGGGCTCAGTG
CCAGGGATGGCCATTTCTCCTTCCCGAATGCCTCAGCCTCCGAACATGATGGGTGCACACACCAACAACATGATG
GCCCAGGCGCCCGCTCAGAGCCAGTTTCTGCCACAGAACCAGTTCCCGTCATCCAGCGGGGCGATGAGTGTGGGC
ATGGGGCAGCCGCCAGCCCAAACAGGCGTGTCACAGGGACAGGTGCCTGGTGCTGCTCTTCCTAACCCTCTCAAC
ATGCTGGGGCCTCAGGCCAGCCAGCTACCTTGCCCTCCAGTGACACAGTCACCACTGCACCCAACACCGCCTCCT
GCTTCCACGGCTGCTGGCATGCCATCTCTCCAGCACACGACACCACCTGGGATGACTCCTCCCCAGCCAGCAGCT
CCCACTCAGCCATCAACTCCTGTGTCGTCTTCCGGGCAGACTCCCACCCCGACTCCTGGCTCAGTGCCCAGTGCT
ACCCAAACCCAGAGCACCCCTACAGTCCAGGCAGCAGCCCAGGCCCAGGTGACCCCGCAGCCTCAAACCCCAGTT
CAGCCCCCGTCTGTGGCTACCCCTCAGTCATCGCAGCAACAGCCGACGCCTGTGCACGCCCAGCCTCCTGGCACA
CCGCTTTCCCAGGCAGCAGCCAGCATTGATAACAGAGTCCCTACCCCCTCCTCGGTGGCCAGCGCAGAAACCAAT
TCCCAGCAGCCAGGACCTGACGTACCTGTGCTGGAAATGAAGACGGAGACCCAAGCAGAGGACACTGAGCCCGAT
CCTGGTGAATCCAAAGGGGAGCCCAGGTCTGAGATGATGGAGGAGGATTTGCAAGGAGCTTCCCAAGTTAAAGAA
GAAACAGACATAGCAGAGCAGAAATCAGAACCAATGGAAGTGGATGAAAAGAAACCTGAAGTGAAAGTAGAAGTT
AAAGAGGAAGAAGAGAGTAGCAGTAACGGCACAGCCTCTCAGTCAACATCTCCTTCGCAGCCGCGCAAAAAAATC
TTTAAACCAGAGGAGTTACGCCAGGCCCTCATGCCAACCCTAGAAGCACTGTATCGACAGGACCCAGAGTCATTA
CCTTTCCGGCAGCCTGTAGATCCCCAGCTCCTCGGAATTCCAGACTATTTTGACATCGTAAAGAATCCCATGGAC
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FIGURE 459B

CTCTCCACCATCAAGCGGAAGCTGGACACAGGGCAATACCAAGAGCCCTGGCAGTACGTGGACGACGTCTGGCTC
ATGTTCAACAATGCCTGGCTCTATAATCGCAAGACATCCCGAGTCTATAAGTTTTGCAGTAAGCTTGCAGAGGTC
TTTGAGCAGGAAATTGACCCTGTCATGCAGTCCCTTGGATATTGCTGTGGACGCAAGTATGAGTTTTCCCCACAG
ACTTTGTGCTGCTATGGGAAGCAGCTGTGTACCATTCCTCGCGATGCTGCCTACTACAGCTATCAGAATAGGTAT
CATTTCTGTGAGAAGTGTTTCACAGAGATCCAGGGCGAGAATGTGACCCTGGGTGACGACCCTTCACAGCCCCAG
ACGACAATTTCAAAGGATCAGTTTGAAAAGAAGAAAAATGATACCTTAGACCCCGAACCTTTCGTTGATTGCAAG
GAGTGTGGCCGGAAGATGCATCAGATTTGCGTTCTGCACTATGACATCATTTGGCCTTCAGGTTTTGTGTGCGAC
AACTGCTTGAAGAAAACTGGCAGACCTCGAAAAGAAAACAAATTCAGTGCTAAGAGGCTGCAGACCACAAGACTG
GGAAACCACTTGGAAGACCGAGTGAACAAATTTTTGCGGCGCCAGAATCACCCTGAAGCCGGGGAGGTTTTTGTC
CGAGTGGTGGCCAGCTCAGACAAGACGGTGGAGGTCAAGCCCGGGATGAAGTCACGGTTTGTGGATTCTGGGGAA
ATGTCTGAATCTTTCCCATATCGAACCAAAGCTCTGTTTGCTTTTGAGGAAATTGACGGCGTGGATGTCTGCTTT
TTTGGAATGCACGTCCAAGAATACGGCTCTGATTGCCCCCCTCCAAACACGAGGCGTGTGTACATTTCTTATCTG
GATAGTATTCATTTCTTCCGGCCACGTTGCCTCCGCACAGCCGTTTACCATGAGATCCTTATTGGATATTTAGAG
TATGTGAAGAAATTAGGGTATGTGACAGGGCACATCTGGGCCTGTCCTCCAAGTGAAGGAGATGATTACATCTTC
CATTGCCACCCACCTGATCAAAAAATACCCAAGCCAAAACGACTGCAGGAGTGGTACAAAAAGATGCTGGACAAG
GCGTTTGCAGAGCGGATCATCCATGACTACAAGGATATTTTCAAACAAGCAACTGAAGACAGGCTCACCAGTGCC
AAGGAACTGCCCTATTTTGAAGGTGATTTCTGGCCCAATGTGTTAGAAGAGAGCATTAAGGAACTAGAACAAGAA
GAAGAGGAGAGGAAAAAGGAAGAGAGCACTGCAGCCAGTGAAACCACTGAGGGCAGTCAGGGCGACAGCAAGAAT
GCCAAGAAGAAGAACAACAAGAAAACCAACAAGAACAAAAGCAGCATCAGCCGCGCCAACAAGAAGAAGCCCAGC
ATGCCCAACGTGTCCAATGACCTGTCCCAGAAGCTGTATGCCACCATGGAGAAGCACAAGGAGGTCTTCTTCGTG
ATCCACCTGCACGCTGGGCCTGTCATCAACACCCTGCCCCCCATCGTCGACCCCGACCCCCTGCTCAGCTGTGAC
CTCATGGATGGGCGCGACGCCTTCCTCACCCTCGCCAGAGACAAGCACTGGGAGTTCTCCTCCTTGCGCCGCTCC
AAGTGGTCCACGCTCTGCATGCTGGTGGAGCTGCACACCCAGGGCCAGGACCGCTTTGTCTACACCTGCAACGAG
TGCAAGCACCACGTGGAGACGCGCTGGCACTGCACTGTGTGCGAGGACTACGACCTCTGCATCAACTGCTATAAC
ACGAAGAGCCATGCCCATAAGATGGTGAAGTGGGGGCTGGGCCTGGATGACGAGGGCAGCAGCCAGGGCGAGCCA
CAGTCAAAGAGCCCCCAGGAGTCACGCCGGGTGAGCATCCAGCGCTGCATCCAGTCGCTGGTGCACGCGTGCCAG
TGCCGCAACGCCAACTGCTCGCTGCCATCCTGCCAGAAGATGAAGCGGGTGGTGCAGCACACCAAGGGCTGCAAA
CGCAAGACCAACGGGGGCTGCCCGGTGTGCAAGCAGCTCATCGCCCTCTGCTGCTACCACGCCAAGCACTGCCAA
GAAAACAAATGCCCCGTGCCCTTCTGCCTCAACATCAAACACAAGCTCCGCCAGCAGCAGATCCAGCACCGCCTG
CAGCAGGCCCAGCTCATGCGCCGGCGGATGGCCACCATGAACACCCGCAACGTGCCTCAGCAGAGTCTGCCTTCT
CCTACCTCAGCACCGCCCGGGACCCCCACACAGCAGCCCAGCACACCCCAGACGCCGCAGCCCCCTGCCCAGCCC
CAACCCTCACCCGTGAGCATGTCACCAGCTGGCTTCCCCAGCGTGGCCCGGACTCAGCCCCCCACCACGGTGTCC
ACAGGGAAGCCTACCAGCCAGGTGCCGGCCCCCCCACCCCCGGCCCAGCCCCCTCCTGCAGCGGTGGAAGCGGCT
CGGCAGATCGAGCGTGAGGCCCAGCAGCAGCAGCACCTGTACCGGGTGAACATCAACAACAGCATGCCCCCAGGA
CGCACGGGCATGGGGACCCCGGGGAGCCAGATGGCCCCCGTGAGCCTGAATGTGCCCCGACCCAACCAGGTGAGC
GGGCCCGTCATGCCCAGCATGCCTCCCGGGCAGTGGCAGCAGGCGCCCCTTCCCCAGCAGCAGCCCATGCCAGGC
TTGCCCAGGCCTGTGATATCCATGCAGGCCCAGGCGGCCGTGGCTGGGCCCCGGATGCCCAGCGTGCAGCCACCC
AGGAGCATCTCACCCAGCGCTCTGCAAGACCTGCTGCGGACCCTGAAGTCGCCCAGCTCCCCTCAGCAGCAACAG
CAGGTGCTGAACATTCTCAAATCAAACCCGCAGCTAATGGCAGCTTTCATCAAACAGCGCACAGCCAAGTACGTG
GCCAATCAGCCCGGCATGCAGCCCCAGCCTGGCCTCCAGTCCCAGCCCGGCATGCAACCCCAGCCTGGCATGCAC
CAGCAGCCCAGCCTGCAGAACCTGAATGCCATGCAGGCTGGCGTGCCGCGGCCCGGTGTGCCTCCACAGCAGCAG
GCGATGGGAGGCCTGAACCCCCAGGGCCAGGCCTTGAACATCATGAACCCAGGACACAACCCCAACATGGCGAGT
ATGAATCCACAGTACCGAGAAATGTTACGGAGGCAGCTGCTGCAGCAGCAGCAGCAACAGCAGCAGCAACAACAG
CAGCAACAGCAGCAGCAGCAAGGGAGTGCCGGCATGGCTGGGGGCATGGCGGGGCACGGCCAGTTCCAGCAGCCT
CAAGGACCCGGAGGCTACCCACCGGCCATGCAGCAGCAGCAGCGCATGCAGCAGCATCTCCCCCTCCAGGGCAGC
TCCATGGGCCAGATGGCGGCTCAGATGGGACAGCTTGGCCAGATGGGGCAGCCGGGGCTGGGGGCAGACAGCACC
CCCAACATCCAGCAAGCCCTGCAGCAGCGGATTCTGCAGCAACAGCAGATGAAGCAGCAGATTGGGTCCCCAGGC
CAGCCGAACCCCATGAGCCCCCAGCAACACATGCTCTCAGGACAGCCACAGGCCTCGCATCTCCCTGGCCAGCAG

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FIGURE 459C

ATCGCCACGTCCCTTAGTAACCAGGTGCGGTCTCCAGCCCCTGTCCAGTCTCCACGGCCCCAGTCCCAGCCTCCA
CATTCCAGCCCGTCACCACGGATACAGCCCCAGCCTTCGCCACACCACGTCTCACCCCAGACTGGTTCCCCCCAC
CCCGGACTCGCAGTCACCATGGCCAGCTCCATAGATCAGGGACACTTGGGGAACCCCGAACAGAGTGCAATGCTC
CCCCAGCTGAACACCCCCAGCAGGAGTGCGCTGTCCAGCGAACTGTCCCTGGTCGGGGACACCACGGGGGACACG
CTAGAGAAGTTTGTGGAGGGCTTGTAGCATTGTGAGAGCATCACCTTTTCCCTTTCATGTTCTTGGACCTTTTGT
ACTGAAAATCCAGGCATCTAGGTTCTTTTTATTCCTAGATGGAACTGCGACTTCCGAGCCATGGAAGGGTGGATT
GATGTTTAAAGAAACAATACAAAGAATATATTTTTTTGTTAAAAACCAGTTGATTTAAATATCTGGTCTCTCTCT
TTGGTTTTTTTTTGGCGGGGGGGTGGGGGGGGTTCTTTTTTTTCCGTTTTGTTTTTGTTTGGGGGGAGGGGGGGTT
TTGTTTGGATTCTTTTTGTCGTCATTGCTGGTGACTCATGCCTTTTTTTAACGGGAAAAACAAGTTCATTATATT
CATATTTTTTATTTGTATTTTCAAGACTTTAAACATTTATGTTTAAAAGTAAGAAGAAAAATAATATTCAGAACT
GATTCCTGAAATAATGCAAGCTTATAATGTATCCCGATAACTTTGTGATGTTTCGGGAAGATTTTTTTCTATAGT
GAACTCTGTGGGCGTCTCCCAGTATTACCCTGGATGATAGGAATTGACTCCGGCGTGCACACACGTACACACCCA
CACACATCTATCTATACATAATGGCTGAAGCCAAACTTGTCTTGCAGATGTAGAAATTGTTGCTTTGTTTCTCTG
ATAAAACTGGTTTTAGACAAAAAATAGGGATGATCACTCTTAGACCATGCTAATGTTACTAGAGAAGAAGCCTTC
TTTTCTTTCTTCTATGTGAAACTTGAAATGAGGAAAAGCAATTCTAGTGTAAATCATGCAAGCGCTCTAATTCCT
ATAAATACGAAACTCGAGAAGATTCAATCACTGTATAGAATGGTAAAATACCAACTCATTTCTTATATCATATTG
TTAAATAAACTGTGTGCAACAGACAAAAAGGGTGGTCCTTCTTGAATTCATGTACATGGTATTAACACTTAGTGT
TCGGGGTTTTTTGTTATGAAAATGCTGTTTTCAACATTGTATTTGGACTATGCATGTGTTTTTTCCCCATTGTAT
ATAAAGTACCGCTTAAAATTGATATAAATTACTGAGGTTTTTAACATGTATTCTGTTCTTTAAGATCCCCTGTAA
GAATGTTTAAGGTTTTTATTTATTTATATATATTTTTTGGTCTGTTCTTTGTAAAAAAAAAAAAAAAAA

FIGURE 460

MAENLLDGPPNPKRAKLSSPGFSANDSTDFGSLFDLENDLPDELIPNGGELGLLNSGNLVPDAASKHKQLSELLR
GGSGSSINPGIGNVSASSPVQQGLGGQAGQPNSANMASLSAMGKSPLSQGDSSAPSLPKQAASTSGPTPAASQA
LNPQAQKQVGLATSSPATSQTGPGICMNANFNQTHPGLLNSNSGHSLINQASQGQAQVMNGSLGAAGRGRGAGMP
YPTPAMQGASSSVLAETLTQVSPQMTGHAGLNTAQAGGMAKMGITGNTSPFGQPFSQAGGQPMGATGVNPQLASK
QSMVNSLPTFPTDIKNTSVTNVPNMSQMQTSVGIVPTQAIATGPTADPEKRKLIQQQLVLLLHAHKCQRREQANG
EVRACSLPHCRTMKNVLNHMTHCQAGKACQVAHCASSRQIISHWKNCTRHDCPVCLPLKNASDKRNQQTILGSPA
SGIQNTIGSVGTGQQNATSLSNPNPIDPSSMQRAYAALGLPYMNQPQTQLQPQVPGQQPAQPQTHQQMRTLNPLG
NNPMNIPAGGITTDQQPPNLISESALPTSLGATNPLMNDGSNSGNIGTLSTIPTAAPPSSTGVRKGWHEHVTQDL
RSHLVHKLVQAIFPTPDPAALKDRRMENLVAYAKKVEGDMYESANSRDEYYHLLAEKIYKIQKELEEKRRSRLHK
QGILGNQPALPAPGAQPPVIPQAQPVRPPNGPLSLPVNRMQVSQGMNSFNPMSLGNVQLPQAPMGPRAASPMNHS
VQMNSMGSVPGMAISPSRMPQPPNMMGAHTNNMMAQAPAQSQFLPQNQFPSSSGAMSVGMGQPPAQTGVSQGQVP
GAALPNPLNMLGPQASQLPCPPVTQSPLHPTPPPASTAAGMPSLQHTTPPGMTPPQPAAPTQPSTPVSSSGQTPT
PTPGSVPSATQTQSTPTVQAAAQAQVTPQPQTPVQPPSVATPQSSQQQPTPVHAQPPGTPLSQAAASIDNRVPTP
SSVASAETNSQQPGPDVPVLEMKTETQAEDTEPDPGESKGEPRSEMMEEDLQGASQVKEETDIAEQKSEPMEVDE
KKPEVKVEVKEEEESSSNGTASQSTSPSQPRKKIFKPEELRQALMPTLEALYRQDPESLPFRQPVDPQLLGIPDY
FDIVKNPMDLSTIKRKLDTGQYQEPWQYVDDVWLMFNNAWLYNRKTSRVYKFCSKLAEVFEQEIDPVMQSLGYCC
GRKYEFSPQTLCCYGKQLCTIPRDAAYYSYQNRYHFCEKCFTEIQGENVTLGDDPSQPQTTISKDQFEKKKNDTL
DPEPFVDCKECGRKMHQICVLHYDIIWPSGFVCDNCLKKTGRPRKENKFSAKRLQTTRLGNHLEDRVNKFLRRQN
HPEAGEVFVRVVASSDKTVEVKPGMKSRFVDSGEMSESFPYRTKALFAFEEIDGVDVCFFGMHVQEYGSDCPPPN
TRRVYISYLDSIHFFRPRCLRTAVYHEILIGYLEYVKKLGYVTGHIWACPPSEGDDYIFHCHPPDQKIPKPKRLQ
EWYKKMLDKAFAERIIHDYKDIFKQATEDRLTSAKELPYFEGDFWPNVLEESIKELEQEEEERKKEESTAASETT
EGSQGDSKNAKKKNNKKTNKNKSSISRANKKKPSMPNVSNDLSQKLYATMEKHKEVFFVIHLHAGPVINTLPPIV
DPDPLLSCDLMDGRDAFLTLARDKHWEFSSLRRSKWSTLCMLVELHTQGQDRFVYTCNECKHHVETRWHCTVCED
YDLCINCYNTKSHAHKMVKWGLGLDDEGSSQGEPQSKSPQESRRVSIQRCIQSLVHACQCRNANCSLPSCQKMKR
VVQHTKGCKRKTNGGCPVCKQLIALCCYHAKHCQENKCPVPFCLNIKHKLRQQQIQHRLQQAQLMRRRMATMNTR
NVPQQSLPSPTSAPPGTPTQQPSTPQTPQPPAQPQPSPVSMSPAGFPSVARTQPPTTVSTGKPTSQVPAPPPPAQ
PPPAAVEAARQIEREAQQQQHLYRVNINNSMPPGRTGMGTPGSQMAPVSL

FIGURE 461A

GAGGATGCAGAGTGGGAGACCTTAAAACCGTCTGATCTGGCTGCTAAAGCGAGTGTCTGACGACCACCCATTAAC
ACCAGCGAGTAGCGTTTGCTCACGGCTTTAGGATAAGAAGCCTGGA**ATG**GTCCCCCCTCCGCCGGGAGAAGAAAG
CCAGACGGTCATCCTTCCACCTGGCTGGCAGAGCTACCTGTCGCCTCAGGGCCGGCGGTACTATGTCAACACGAC
CACCAATGAGACCACCTGGGAACGTCCCAGCAGTTCTCCTGGGATTCCAGCCAGCCCTGGCTCTCACAGGAGCTC
TCTGCCTCCAACAGTGAATGGATACCACGCATCAGGGACCCCAGCGCACCCTCCAGAGACTGCCCACATGAGTGT
CCGAAAATCCACCGGTGATTCCCAGAACCTGGGATCCTCATCGCCAAGCAAAAAGCAGAGCAAGGAAAACACCAT
CACAATAAACTGTGTGACGTTCCCTCACCCAGACACGATGCCGGAACAGCAGCTGCTGAAACCAACCGAGTGGAG
CTACTGCGACTACTTCTGGGCTGATAAGAAGGACCCCCAAGGCAACGGCACGGTGGCTGGGTTTGAACTACTGCT
CCAGAAACAGCTGAAGGGCAAACAAATGCAGAAGGAAATGTCAGAATTCATCCGGGAAAGGATAAAGATTGAAGA
AGACTATGCGAAGAACTTAGCTAAGCTCTCTCAGAACTCCTTGGCTTCACAGGAGGAAGGCTCCTTGGGAGAGGC
GTGGGCCCAGGTGAAGAAGAGCCTGGCGGACGAAGCAGAAGTTCACCTCAAGTTCTCTGCCAAGCTTCACAGCGA
GGTGGAGAAGCCCCTGATGAACTTCCGTGAGAACTTCAAGAAAGACATGAAGAAGTGCGACCACCACATTGCCGA
CCTTCGCAAGCAGCTCGCCAGCCGCTATGCCTCGGTGGAGAAGGCCCGGAAAGCCCTCACAGAGCGGCAGAGAGA
CCTGGAGATGAAGACCCAGCAGCTGGAGATCAAGCTGAGCAACAAGACAGAGGAGGACATCAAGAAGGCGCGGAG
AAAGTCCACACAGGCTGGAGACGACCTCATGCGCTGTGTGGATCTCTACAACCAGGCCCAGTCCAAATGGTTTGA
AGAGATGGTGACCACCACATTGGAGCTAGAGCGGCTGGAGGTGGAGAGGGTAGAGATGATCCGGCAGCACCTGTG
CCAGTACACGCAGCTGCGGCATGAAACAGACATGTTCAACCAAAGCACAGTCGAGCCCGTGGATCAGCTGCTTCG
AAAAGTGGACCCGGCCAAAGACAGGGAGCTGTGGGTCAGAGAGCACAAGACGGGCAACATCCGCCCTGTGGACAT
GGAGATC**TAG**ATGGCCTGTGCAGCTTCGGGGGGTCCTGCTGGGGAGGGGGGCTGGGCTCCCACCATGGGGCCCA
TGCCGAGTGGATGCCCCCCACCCTCTCTCCTGGGCCACTGAGGAGAGGGGAGAGAGCTGGTGATTCCAGAAGGGT
GACCCGGACAGCCTAGCTGGGGGCTCCCCCATATTCCCAGGCCCAGAAGACAGACCCACAGCCCTGCCCTTGTCT
CTGAGGCTGAAGACCCCCTGACTCCCATGCTGTGCTTGCCGCTCTGAAACAAACAGAGGCTGGAACTTTGTGGTC
CTTGCCGAGTTTTGTAGGGGTCACTGTCACATGCTTGTGCCCTGGAAGCCCCAAGGCTCTTCCTCCAGCTGGCTC
CCTTGTCTCCAGGGCTTTGGAGGATCAGGGTAGGGAGGGCTCTGTCTCTAAGCCAGGTGTCAGGATCAGAATCAT
GGGTAGAAGGTGCCATTCAGCTCACAGCCGCACCCAGAATCCTTTGCAGCCCTCCTTCTTTATTTTTTTCCCATT
GCATTCTGGGAGTCCACATCTGGCTTTCTCAGCCACTGTTCATCACCAGGGGTTTTAGGAGGAAGGCTTGGCTCC
TGTCTTCCCAGACCCACCATGCCTGGAGAGGTCAGGATGGAACTACCTCATTCGGCAAATTAGCCCCAAATTGAG
CGCTGAATCGTGTCCCATGAGATCAGGCGCCATCTGTAAAGTCTCCTCTGGAAATGCCAATCCATCCTTCCCCCA
GCTGCTTCCTCGGGGAGGCCCCTGCCCCCACCCTGCCAGCCCTTCCCAGTCTCATTAGAGGAAGCTTTCCAAAGT
TCTCAGTTATCAAGACCTCATCCAGCTCGTCCAAAGGCTTCAGGGATGGAAACAAACCAGCTCGTCTCAGAGGCC
AGCAAGCTGGGGCCTGTCCGCCACGGTGCCCTGTGCACCTTTGGGCTGCCCTGGCCCCCACTCTCCCGGGCCGCC
CACCACAGGCTCTTAATGGGGCCGGGTCAGTCCTACATGTGAGATGGGTTAGGGCAAGTCTTTGCCATCCCCCAG
ATGGCTCTGTCTTCTTGTGTATGGCAGGGCTGGGACTGCTGTCCCTTGTACAGTTTTCTGTCACTGGTGGGCACT
GGACAGGCATAGCAGACTCTCTTGTGGCCACACTAGGTTGTCGCCTTTCAGGCAGTGTCCCGCCACCTTTGCTTC
CCGCTCCTTCTGGACATTCCAGAGCCCTGCACCAAACCCTTACTTGGTGTCTGCACCTCCTTTCCCTCTCTCCAT
CTTCCAATCCCTGGAAAGTCTGGTCTGAGTGTGACTTGGGAAGCTTTCAGTGCTGCTGTTTGGCCCAGCTCATT
ACTTTCTCCCTTTCTCTACCACAGCAAACACATTCTCCACCATGTCAGTCTAAAGAGTCTAAAGGGGCCGGGAGA
AGCATGAGCGAGGGGCAGATTCTAGTCGGGAGCCCATGCCCTGGAAATCCATCTTTCTTCATCTTTCCCATTGAC
CACTTTGGGTTTGACCTGCACATCTGCAGTGAGGGCAGAATTCAACAAGCACAACTCACTGGTCTTTCAGTCAAC
GTGCTAGAAACCGATGACTTATTAATCTCTAATTTTTTGGCGCCTCTTTCATTGAATGAGAATTGCTTTCGTATA
GTTCACATTAGAAAAATGCCTAATATACTAAAGTAAACCAAACGTTGTCACTTTTCTCTTGTTCTTGAAACATTG
CAACCAAAAAGGTCAGCACAAAGGCCTTCACCTACGTGAAGACCTCCTGGTAGGATCTGTCCATGGGATGGAGAA
CCACTCTGTCCAGATCTGGGGTTGGGTCATGACACCAGCTACCAATTTTAGAATATTATTTCTTGGTTTCTTTAT
GAAAAATGGGTGCTAGTGGTAATTGCTTTGTGGCTTAGTAAACTACTCTGTGGATGATTTCCAAACATTCAAAGC
CAATAGCCTTGTTATTAACAAGATATTTTGAGTACAATATGGCTCATTGACTTTTCCATTACATCTGAGGATTCC
AGAGTCCTCTGTTCATCCCTGGGATAGAGTGAGCCCTCTTGCGTCTTCCAGGGTAGCTCAGGTTGGCCCAGTTTG
GGCCAGTCCATTTTTGGAGGTCACTCTTTCCCCCCTCATCCCCTCACCTCCTTCTCTTTACCCCCTTCACGTACT
TCCTTTCTTTCTTCCCTCTGTTATTCATTCATCAAGCAGGTTAAAGCCATTGTGCTAAGATCTAATCTGAGGACA

FIGURE 461B

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CTATAATGGCCCTGTCGTCAGGGAAGCCCGTGATCGCTCGTTTTCAGGGGTCTTACCGGTCAGCAACCTTGGCAT
TGATACATAGGCACTCTACAGAATTTAAGTTTTCAGAGGTAAGTCTGTTGTTCTGATTAATCTGCATTCATTCAG
CGAATGCTCAAGACAAGCCAGGCATGCTGAGAAGCGGCGCTCTAGTTGTATGTAAGATGGGCATTCCTCTGCTCT
CCTCTATTCTCCATGTCGACTGAGAAGAGTATAATAAGAACATTGTACCCTCTCCACACTTAACCCTCTGGGATT
CTTTATTATAATATAAACCACCGTCGTGAGGCATTTACCTGTTGGATGGAAGGTAGACAGCAACAAGATTTTAAT
CACCTGGTCACCAGACCCTCACGGCCCATATCCAATTCGAATTTCAGAAATTTCTCTGTTTGCTTTAAATAACTC
TTTACAAATAAGGGTCGGGCACGGTGGCTCACGCCTGTAATCCCAGCTCTTTGGGAGGCCGAGGTGGGCAGATCA
CGAGGTCAGGAGATCGAGACCATCCTGGCTAACATGGTGAAACCCCGTCTCTGCTAAAAATACAAAAAATTAGCC
AGATGTGGTGGTGCACACCTGTAGTCCCAACTATTCGGCAGGCTGAGGCAGTAGAATCGCTTGAACCTGGGAGGC
GGAGATTGCAGTGAACCAAGATCGGGCCACTGCACTCCAGCTTGGGTGACAGAGCAAGACTCCATCTCAAAAAAA
TTATAAATAACTCTTTGCAAATAGGAAAGTGAAGCTCAAGGGTAACCAGTGAGGCTATGAAATTGCCAGTGAATT
AAGACCAGGGCTAGAGTCAACAGTCCAGAACCCCTATCCGTATGAACAGGGGCCCGTTTCTGGTTGAAATCAAGG
TTAGGATGCAACTGAGAAAATAAAAGACTGCACTTTGGAGAGGCAAGCACGCTATCCGGGTTGTTGTTTTGTTTT
ATGTCTTGGTGCTTAGGTGAGGACTTAGCTGGGTTTATTCAAAGTGGGCGGGTCTGGGCTATTCTTGAGAATGTC
CCTTCCATTTCTGAGAACAAGTCAGCCCCTTCTACCTGCCTCCACCCAGGAGACTGATGCACAAGATCTGTTTGT
GAAAGCCTGATTTAAAAAGAAAAAAAAATTCCTTAAGCCAAATGGTGTTCCAAGTTGGTTGCTGTGACAACCTC
CAGGAAGAGCCACTTGTTACCCTCTATTCTTTCTAGTGCTTTCAGTCAGTGGCAACACATAGGCCCCTTGGACCG
TGGGGATGGCGGCCCTGAGATTCTGTCAGTGGGACCACCCTGGGCCTCCTTTCTACCTCCACTCAGCACCCTGTT
GGCCAAGGAGAATTTCTGCGGTGGGAGGCAGTGCTCTGCTAGTCAGGATTGATAAACAGCTGGGCACACCGAAAC
AGTGTACCAACGAATTCACCAACCAGGGGTTTCTTTCCCTACCCTTTGTGAAAACCAATCAATTACTAGATGAGT
GGATGGATGCAGAAAAATCTGGGCTGAGCCAAAGTCCCTTTTGGAAATACAAGCCATAACATTCGAAGGACATCA
GCGACCTTGGCTTGTTTAGGTGATTTTACTTCCAGCTGCAGGTAGTCTTGACAAGGAGTGTTTAAACAGAAGGCT
CAAGATGCATTCCTTGTGTAGGTCGGAGAGAGCACTTCTAATGTTAAGTGGGGTACAGATCAGCTGCCCCCCCAC
GTAGCCTGGACATCGTCTTATCCCCATAATCCTTGCCATCCCTACAAGGCCCATCGCCACCACCTTTTCCCAGGT
TTATTGAGGTATGATTGACATCCAGTAAAATTCACCCTTTGGAAATATACAGCTCTGTGAATTTTGACAAATTTA
GTGTCTTGTGACCATCACCAAGATCAACCTGTTTTTAACCCTCCAAAAAATTCCCTTCTCCTGCCCTCTTTCCCT
GGCAACCCTGATTGATTATCTGATCCTATAATTTTGCCTTTTCTAGAATGTCATATAAATGGAGTCACACTGATG
TCGCCTTTTGAGTCTGGCATCTTTCCCTCAGCTTAATGCTTTTGAGTCATTCATGATGTGTGCGTGTGGTTTGTT
CCTTCTCCTTGCCGGGAAGTATTTCATTGCATGGGCGTACTACTCTGCTTCTTTATTTTTACACTGAGCCTTTCG
CCCTGGAAGTTCTTGGCCCAGGGTCTTCAACTTGTTTGCACGACCACTTCCAGCTTGCTGCTTCCTTCAGTTCCC
CAGGCTCCTCCTCCAAATGCCAGCTGTGCCCACAAGCTGTTCTTAGGGCTCACACTCGCCTTTTGGCGCGTGGTG
GGTTTTTGGTAGTGCAGAAAGAATCCAGGGATGGGAGGGGAAGGGACGGATGGGTGCTCAATTGCTGCTCACGTC
TGCTGCAACCTGAAGCTTGCATCTCAGCCAGCAGATCTGCTCCCTTCTGGGACCCAGGCTTCAGTGTCACACGGT
CCTTGGCTATGTATTGGGCGTTGGAGGCTTTGAAAGGCGAGCAGAAGCAGCATGGACAAGAAGGCTGGGGCTGGC
CCTGGGGCTCATCATGATGCTTTCCTGGATCTGTTGCTTCATCTGCAAGCTGAGGGTGTTTGTTCTAGATGAGTG
TCTCAGGCCACCGGCAACTGCATGTACCTCCTCCCTTTCTCATTTCAATGATGTACCCTGTACACGTGTTCATG
CTGTGTCTGGCTCTCATCTGCACAATCGTGCATAGAATTGCCTCAAGTCCTGGTGAGAGAGATGCCGTGGTACTT
TTCCATTTAGATTCAAATGGAGCTAAAATTAAGAGTTTTATGAGCTGTTAAGAATGAGGTAGTTTCTCCTAGGAC
CCCCCAAAGACAGTGCAAGTAATGACCGTTTGGATCTCATTCGTCGATCTTTGATAGTATGTTCTGGAGTCTACT
CCCCAGGAGCCAGGACAGGCGTGAAGATGGAGTCCTTGTCGCAGCTGGAGCCTTGCCTAGCTGGTGATCACACAG
CCTGGCCTGTACCTGCACCCCACTGGATGGTGGTACATGGTGGCAGGGACAGGACCACACCCAGTTAAGGCCAGA
CCAGGCTGAGTGTGACCCCTGAGGTAAACACTCCACTAAGCTGTGTCTTGTTCATGCCCCCTGCTCAGTGAAAGG
TGAGTCCCGAGACCAGTTGGGTACCTCTCTATGCGAACCAGAGACATTTCTGGATCCAGGCCAGGTGAAGATTAG
GGCCAGGAAGCCTGAGCCCCCGGGGCCTCAAGGTAGGGAGCCGAAGAGGCTGCCAGGACTCTGCTGGGTTGAAAT
TTGCCGGGGAGGACTCTTGTCTCCCCCTCAGGAGTATTTTTGTTGAGGCTTTCCTGGAGGTGAAGAAGCAATTCC
CATTGCAGCAGGTTAGAGCGAGAATCAGACAGAGGGCAAAAACCAATTCGCTTCTCCCCACGTTCTAAATGCTGG
GGCATGGCTGTCAGGAGGGCTTCCTGGGAGGTGTCTCTGGGGGTGGGGTGAGGTTGGGGCGATGGCCTTTGGAGA
TTGCGTGTGGTGTTCAGGACTGTTCCTTGGTGTTTGAGGGAAACTTTAGTGGGATTGCAGTGGAATGTAAGGTCA
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FIGURE 461C

GGGCACGTGGGTGCTCTCTCGGGGTGGGGTGACTGGGAGACCTAGAGGGAAAGCCTGCTATGCAGGGGGAGAGCA
CAGGACTGGCCCTGCTCTGCGGCCTCCTTTGTCCCATAACCTGAAGTTAAGTCACATCCCCTGTCGGGACCTCCG
TGCACTCATCTGTCAAGTGGGGGCGCTTCCCTTCCAGCATCACCTGCAGCAGACGGGCTCTCGGGAGTCGTGGGT
TCCAGGCAGCTGTGTGGACCCAGGGACAGACATTCAAAGGGACGCCAGCCATCCTTAGTGACAGGGGCCCCAACT
TAGCATCCCTTCCCTTCCGTTAGGAAGGAGATGACCGGAAGCAACCCCTTCACAGACACGAGCACATCGGCAAAC
CCTATGAAAGTGGAATTTTCTAACAAAATAAACTTGCTTGTTTGATCTGTTTTCTGTAACTTTTGCTAAATACTT
TATACATTTTTCATGTTAAAGAGCCGTGTCTCCCGCCAGCACTCCTCACCCCGGTATGAATGTGTTTCCTCCACA
TTGTATATCCTTCCACCCTCTGGCTGCCTAGATCAGTAAATAAAATTGATGTAATATAATTTATAAGTAACACTG
TTGAAACCCTGATCCCAGTGGAGGCTGTAACCCACCTGCCCCCGCACCACCCCCCTGACCCCTGTTACCGCATTT
GTGTGTATTAATGCTGAAGAATTAAATGTTTAAAGAGTTTAAATTTTGAAGGCGTTTGCTATATACAGTTGTCCT
GCATTATTATAAAGAGTTTTCAGGAAGTT

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FIGURE 462

MVPPPPGEESQTVILPPGWQSYLSPQGRRYYVNTTTNETTWERPSSSPGIPASPGSHRSSLPPTVNGYHASGTPA
HPPETAHMSVRKSTGDSQNLGSSSPSKKQSKENTITINCVTFPHPDTMPEQQLLKPTEWSYCDYFWADKKDPQGN
GTVAGFELLLQKQLKGKQMQKEMSEFIRERIKIEEDYAKNLAKLSQNSLASQEEGSLGEAWAQVKKSLADEAEVH
LKFSAKLHSEVEKPLMNFRENFKKDMKKCDHHIADLRKQLASRYASVEKARKALTERQRDLEMKTQQLEIKLSNK
TEEDIKKARRKSTQAGDDLMRCVDLYNQAQSKWFEEMVTTTLELERLEVERVEMIRQHLCQYTQLRHETDMFNQS
TVEPVDQLLRKVDPAKDRELWVREHKTGNIRPVDMEI

FIGURE 463

TGCGACGTGACTGGCTAGCTGCGTGGGTACTGGAACAAGCAAACGAGGCAGCGAGCGAAGGACGGGAGCCGGACC
CTGGGCCCCGTGGAACTCCAGCCTGCGCCACCACGTCACGCACACGCTCGGCGCTGCGATCCGCGCATATAACGA
TATTTGGATTTGACCTGCATTTTGGAATTTATCTACACTTAAA**ATG**CCACCAGCAGTTGGAGGTCCAGTTGGATA
CACCCCCCCAGATGGAGGCTGGGGCTGGGCAGTGGTAATTGGAGCTTTCATTTCCATCGGCTTCTCTTATGCATT
TCCCAAATCAATTACTGTCTTCTTCAAAGAGATTGAAGGTATATTCCATGCCACCACCAGCGAAGTGTCATGGAT
ATCCTCCATAATGTTGGCTGTCATGTATGGTGGAGGTCCTATCAGCAGTATCCTGGTGAATAAATATGGAAGTCG
TATAGTCATGATTGTTGGTGGCTGCTTGTCAGGCTGTGGCTTGATTGCAGCTTCTTTCTGTAACACCGTACAGCA
ACTATACGTCTGTATTGGAGTCATTGGAGGTCTTGGGCTTGCCTTCAACTTGAATCCAGCTCTGACCATGATTGG
CAAGTATTTCTACAAGAGGCGACCATTGGCCAACGGACTGGCCATGGCAGGCAGCCCTGTGTTCCTCTGTACTCT
GGCCCCCCTCAATCAGGTTTTCTTCGGTATCTTTGGATGGAGAGGAAGCTTTCTAATTCTTGGGGGCTTGCTACT
AAACTGCTGTGTTGCTGGAGCCCTCATGCGACCAATCGGGCCCAAGCCAACCAAGGCAGGGAAAGATAAGTCTAA
AGCATCCCTTGAGAAAGCTGGAAAATCTGGTGTGAAAAAAGATCTGCATGATGCAAATACAGATCTTATTGGAAG
ACACCCTAAACAAGAGAAACGATCAGTCTTCCAAACAATTAATCAGTTCCTGGACTTAACCCTATTCACCCACAG
AGGCTTTTTGCTATACCTCTCTGGAAATGTGATCATGTTTTTTGGACTCTTTGCACCTTTGGTGTTTCTTAGTAG
TTATGGGAAGAGTCAGCATTATTCTAGTGAGAAGTCTGCCTTCCTTCTTTCCATTCTGGCTTTTGTTGACATGGT
AGCCCGACCATCTATGGGACTTGTAGCCAACACAAAGCCAATAAGACCTCGAATTCAGTATTTCTTTGCGGCTTC
CGTTGTTGCAAATGGAGTGTGTCATATGCTAGCACCTTTATCCACTACCTATGTTGGATTCTGTGTCTATGCGGG
ATTCTTTGGATTTGCCTTCGGGTGGCTCAGCTCCGTATTGTTTGAAACATTGATGGACCTTGTTGGACCCCAGAG
GTTCTCCAGCGCTGTGGGATTGGTGACCATTGTGGAATGCTGTCCTGTCCTCCTGGGGCCACCACTTTTAGGTCG
GCTCAATGACATGTATGGAGACTACAAATACACATACTGGGCATGTGGCGTCGTCCTAATTATTTCAGGTATCTA
TCTCTTCATTGGCATGGGCATCAATTATCGACTTTTGGCAAAAGAACAGAAAGCAAACGAGCAGAAAAAGGAAAG
TAAAGAGGAAGAGACCAGTATAGATGTTGCTGGGAAGCCAAATGAAGTTACCAAAGCAGCAGAATCTCCGGACCA
GAAAGACACAGAAGGAGGGCCCAAGGAGGAGGAAAGTCCAGTC**TGA**ATCCATGGGGCTGAAGGGTAAATTGAGCA
GTTCATGACCCAGGATATCTGAAAATATTCTACTGGCCTGTAATCTACCAGTGGTGCTCAATGCAAATAGTAGAC
ATTTGTGTGGAAATCATACCAGTTGTTCATTGATGGGATTTTTGTTTGACTCCTTACCAATAGCCTGAATTTGAG
GAGGGAATGATTGGTAGCAAAGGATGGGGGAAAGAAGTAGGTTCTGTTTTGTTTTGTTTAATCTTAGCTTTTAA
TAGTGTCATAAAGATTATAATATGTGCCTTAAGTTTTAGTCTTTAGAACTCTAGAGAGCCTTAACTTCTTAAACC
ATTTTTGCTGAATTCATCTATTTCGAGTGTTGTGTTAAAAGGAAAAATAACAACTAACTTGTTTGAGGCAAATCT
AAAATTTAAAATTAATCTTGCTTCATTGTTACATGTAATATATTTCAGACATTTTCACTGGAAGATTTATGAACA
GAAATATTGGTTGAAAGTTAGAGATTTTACAAAATGCTGACAAAAATATTTTCCTAGCATCAGTAGATTTCTGGC
ATATGTTTCTGCTAGCTATATATTTAGGAAATTCAAAGCATAAAACTTTGGCAACATCTTGGCTGTTCTAGACAC
AGTGTACTTGTCAACCCCTCTCAGGTACCTTTTCTTGGGATGCTTATTAGAAGCCAAGTAAAGTGCTTAAGGTTT
GTTTTCATTAAATTAGCTATTTCTGCTCCCCTGTTCAAAGATGCATTTTGAGTGTTTATAGATCACTGCCCTTTT
TGAAATCACCTGGTATTATTTTTCTTACTGGAAAGTTAGTATTAAAATCTACAGAACTACATATTTGTGCCTCC
TTGGTAAATACAACACATCTAATTAAATGTAGACAGATATTTCAAACATCAGCTGAATTCACTTAAGTTTTTCCA
AAACCTCAGTTAAACTGTGAAGCTATTGGAATTTTTTTTCCTGGAATTTTTCCCCTTTGATTCACAGTGGTCCC
ATTTATATCTGCTTCTAGCTTAGTGCTATGTGTGAGATATGTGTGTGTTTGGTGTTTTTGTTTTTTGTTTTTTT
TTTTTAAGGTTTGCAAATTAAAAAGGGCCAGAAAAATTTGGCACCAGGCAAACGAATAAAGATAGGATTGGGAA
AGAAGTTGCTAAGTGTGCTTAGTTTTAATAAGTAATTCCTTCTCTTTTTTCAGAGAAGGCCTTACAGAAAATTGT
TGTGCTTAGAATTGCTGGATGCATTTTTACCCTCCACACAAACCTAAAAATTTTGTGACCCCTTTCACTTACCTG
AAAAGTAGAGAAATGGATTCAGTATAAGGATAAGGAGGGAAGGTGGACCAGAATGAAAACTGTAAATATTTTTTT
AACCTAATATCACTTAAATCGAGGCAGAAAGATATAGACATTCAATGAATTATATTCAATGCATTTAAAATACCA
CTGTAATTGACAGAGTAAAAGTATAGATACAAACCTTGTGTAAGAGGCTGACTTTTCCAAATAAACATTTTTTA
AGAAAACATTTCTTCTCCCAAATGTCTATTTTCTTGAGGAAAATATTGCTGTGTCTTCATTTTCATTACCAGGTT
TCATTTTGGGCCTTGCTAAATTGATTGAATTAAATCCTCCAGCTTTTGAACCTTGAAAAAAAAAAAAAAAAAAAA
AAAAAAAAAAAAAAGAAAAAAAAAAAAAAAAG

FIGURE 464

MPPAVGGPVGYTPPDGGWGWAVVIGAFISIGFSYAFPKSITVFFKEIEGIFHATTSEVSWISSIMLAVMYGGGPI
SSILVNKYGSRIVMIVGGCLSGCGLIAASFCNTVQQLYVCIGVIGGLGLAFNLNPALTMIGKYFYKRRPLANGLA
MAGSPVFLCTLAPLNQVFFGIFGWRGSFLILGGLLLNCCVAGALMRPIGPKPTKAGKDKSKASLEKAGKSGVKKD
LHDANTDLIGRHPKQEKRSVFQTINQFLDLTLFTHRGFLLYLSGNVIMFFGLFAPLVFLSSYGKSQHYSSEKSAF
LLSILAFVDMVARPSMGLVANTKPIRPRIQYFFAASVVANGVCHMLAPLSTTYVGFCVYAGFFGFAFGWLSSVLF
ETLMDLVGPQRFSSAVGLVTIVECCPVLLGPPLLGRLNDMYGDYKYTYWACGVVLIISGIYLFIGMGINYRLLAK
EQKANEQKKESKEEETSIDVAGKPNEVTKAAESPDQKDTEGGPKEEESPV

FIGURE 465

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GGCACGAGGGAGAACTAGTCTCGATTTTTTTTTTTTTTTTTTTCTTTGTTTTGTTTTTCCTGTATAAAAAAGGAC
CCCAAATATAAAGGTAGGGAAAGGGACAAGAGGGAACATACCCCTTAGTGTAGAGAAATGGGAAGGAGAAGGAGA
AGCCTCAAAAGGAGAGGTGGGAGGGGAATGTCATTAAGGCAGCAAAGTAATCTCTGTAGAAAGATGGAGGAGGAC
CCTCCATAGCCTCAGAGATAAAGGCAAAGATTGCCCTCTCAGTGTCCAGAAGGGAAATGGCAGCTTTTCTTCCTT
CCATGGCAGCCACTCCATTGCTCACTCCGGATTACCTTCATCCTTATGTAGATAAGAGTGCTGCAGAGCTCGAAA
GGCAGAGATTCGCTTGTGTGGGTTAAAAGTCAGCATTTCCAGCAGCAGCTGTGCTCCCGACTCCTCCATCTCAGG
TACCACCGACTGCACTGGGCGGGGCCCTCTGGGGGGAAAGGCTCCACGGGGCAGGGATACATCTCGAGGCCAGTC
ATCCTCTGGAGGCAGCCCAATCAGGTCAAAGATTTTGCCCAACTGGTCGGCTTCAGAGTTTCCACAGAAGAGAGG
CTTTCGACGAAACATCTCTGCAAAGATACAGCCAACACTCCAC**ATG**TCCACAGGTGTTGCATATGTGGACTGCAG
AAGAACTTCGGGAGCTCGGTACCAGAGTGTAACAACCACGGGTGTAAGTGCCATCTGG**TAG**CTGTAGATTCTGGC
CAGGCCAAAGTCAGCCAGCTTGACTGTTCCACCACTTGTCACCAGAATGTTCTCTGGCTTCAGATCTCGGTGAAC
GATGCAATTGGCATGAAGGAAATCTAGGCCTCTTAGAAACTGGCGCATCAGATCCTTGATCGTTTCGGCTGGCAA
GCCTGGTGGGGGTGCCTTGTCCAGATATGTCCTTAGGTCCTGGTCTACATGCTCAAACACCAGGGTTACCTTGAT
CTCCCGGTCAGTTCGGGATGTGGCACAGACGTCCATCAGCCGGACAACATTGGGATGCTCAAAAGCCTCCAGTCG
CCTCAGTAAAGCCACCTCACGAACTGTGCTGATGGGAAGGCCTCCTCCACCTCCTCCTCCATTGGGGACTCTCAC
ACTCTTGAGGGCCACAAAGTGGCCACTGTGGGGATCACGGGCCTTGTACACTGTCCCATAGGCACCGACACCAAT
TTCAGCCACTGGCTCATATCGAGAGGTAGCCATTCTCAGATCAAGGGAGACCCTCACGCCAGCCCGGGGTGCTGT
GGGGGCGGCCCGTTATCGGGGCCCCGGAGCCGGTTCCTACGGCCCCATACACCCGAGCTCGGTCCGGAGCAG
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FIGURE 466

MSTGVAYVDCRRTSGARYQSVTTTGVSAIW

FIGURE 467

GAATTCGAGGATCCGGGTACCATGGGAGGAAAACTTCTTCCTGGCCTGGGCTCCGTGCCGCTCTGTTTGCCAACC
GTCCAGTCCCGCCTACCAGTGCCGGGCGCTCCCCACCCCTCCCCCGGCTCCCCCGGTGTCCGCC**ATG**GCCAAAGC
CTACGACCACCTCTTCAAGTTGCTGCTGATCGGGGACTCGGGGGTGGGCAAGACTTGTCTGATCATTCGCTTTGC
AGAGGACAACTTCAACAACACTTACATCTCCACCATCGGAATTGATTTCAAGATCCGCACTGTGGATATAGAGGG
GAAGAAGATCAAACTACAAGTCTGGGACACGGCTGGCCAAGAGCGGTTCAAGACAATAACTACTGCCTACTACCG
TGGAGCCATGGGCATTATCCTAGTATACGACATCACGGATGAGAAATCTTTCGAGAATATTCAGAACTGGATGAA
AAGCATCAAGGAGAATGCCTCGGCTGGGGTGGAGCGCCTCTTGCTGGGGAACAAATGTGACATGGAGGCCAAGAG
GAAGGTGCAGAAGGAGCAGGCCGATAAGTTGGCTCGAGAGCATGGAATCCGATTTTTCGAAACTAGTGCTAAATC
CAGTATGAATGTGGATGAGGCTTTTAGTTCCCTGGCCCGGGACATCTTGCTCAAGTCAGGAGGCCGGAGATCAGG
AAACGGCAACAAGCCTCCCAGTACTGACCTGAAAACTTGTGACAAGAAGAACACCAACAAGTGCTCCCTGGGC**TG**
AGGACCCTTTCTTGCCTCCCCACCCCGGAAGCTGAACCTGAGGGAGACAACGGCAGAGGGAGTGAGCAGGGGAGA
AATAGCAGAGGGGCTTGGAGGGTCACATAGGTAGATGGTAAAGAGAATGAGGAGAAAAAGGAGAAAAGGGAAAAG
CAGAAAGGAAAAAAAGGAAGAGAGAGGAAGGGAGAAGGGAGAGGAATGAATTGAGGAAGTGAAAGAAGGCAAGGA
GGTAGGAAGAGAGGGAGGAGGAAAGGAAGGAGAGAGATGCCTCAGGCTTCAGACCTTACCTGGGTTTTCAGGGCA
AACATAAATGTAAATACACTGATTTATTCTGTTACTAGATCAGGTTTTAGGGTCCTGCAAAAGGCTAGCTCGGCA
CTACACTAGGGAATTTGCTCCTGTTCTGTCACTTGTCATGGTCTTTCTTGGTATTAAAGGCCACCATTTGCACAA
AAAAAAAAAAAACCATGGTACCCGGATCCTCGAATTC

FIGURE 468

MAKAYDHLFKLLLIGDSGVGKTCLIIRFAEDNFNNTYISTIGIDFKIRTVDIEGKKIKLQVWDTAGQERFKTITT
AYYRGAMGIILVYDITDEKSFENIQNWMKSIKENASAGVERLLLGNKCDMEAKRKVQKEQADKLAREHGIRFFET
SAKSSMNVDEAFSSLARDILLKSGGRRSGNGNKPPSTDLKTCDKKNTNKCSLG

GGTGTGGACGTTGTCTAAATTTCGGTAGCCATGGCACAAGAATATAAGAAAGCATGGGATTATGGCAACCACAGA
ATCTCAGTAGTACAAGTTCCATTCAGTTTTTTCTGAAAGAAAGCCCTCTGTTAAAGTGAAGCAAAGAAACTGTTG
TGGATTATAACGTTTAGAAGTTCCAATTTTTCAGTGCTTTACAAATAAAGCATCATTTAACCTTTTAAATGAAAA
AGATTAAGATCTCATGCAACTGTTGTATTTTCTGGAAGCCATTCTCCAAAAGGGAAGTGCACATTTAAAACACAG
ATATGATGGTCCTTGCTGCAGGGATTTAAGTCTACTTGCTTTTACATC**ATG**ACCAGCTTGAAACGGTCACAGACA
GAAAGGCCTCTTGCCACTGACAGGGCCTCTGTTGTTGGCACAGACGGCACCCCCAAAGTCCACACTGATGATTTC
TACATGCGGCGCTTCCGGTCCCAAAATGGCAGCTTAGGATCATCAGTTATGGCTCCTGTAGGACCCCCCGAAGT
GAAGGTTCTCACCATATAACCTCAACCCCCGGAGTCCCAAAAATGGGGGTAAGGGCAAGGATTGCAGATTGGCCC
CCAAGAAAGGAAAACATAAAAGAATCTAGCCGTTCAAGCCAGGAAATAGAAACCTCAAGTTGCCTTGATAGCCTG
TCCTCCAAAAGCAGTCCTGTGAGTCAGGGAAGTTCTGTTAGCCTCAATTCCAATGACTCAGCCATGCTGAAAAGC
ATACAGAACACGCTGAAAAACAAGACAAGACCGTCGGAGAACATGGACTCCAGATTTCTCATGCCTGAAGCCTAC
CCCAGCTCCCCCAGAAAAGCTCTTCGCAGAATACGCCAGCGAAGCAACAGTGATATCACCATAAGTGAACTTGAT
GTGGATAGCTTTGATGAATGTATCTCACCTACATACAAGACTGGACCATCACTGCACAGGGAATATGGTAGCACA
TCTTCAATTGATAAACAGGGAACATCTGGAGAAAGCTTTTTTGATTTGTTAAAGGGCTACAAAGATGACAAATCT
GATCGAGGTCCAACTCCAACCAAGCTCAGTGACTTTCTCATTACTGGTGGTGGCAAGGGTTCTGGTTTCTCTTTG
GATGTAATAGACGGGCCTATCTCACAGAGAGAGAACCTCAGGCTTTTTAAGGAAAGGGAAAAACCACTCAAGCGA
CGTTCAAAATCTGAAACTGGAGACTCCTCTATTTTTCGTAAATTGCGCAATGCCAAAGGTGAAGAACTTGGGAAG
TCATCAGATCTTGAAGATAACCGATCAGAAGACTCTGTCAGGCCCTGGACATGTCCAAAGTGCTTTGCCCACTAT
GATGTCCAGAGTATATTATTTGATTTGAATGAGGCAATTATGAACAGGCACAATGTTATTAAGAGGAGAAACACC
ACCACTGGAGCTTCCGCAGCTGCCGTGGCATCCTTGGTCTCTGGACCTCTGTCTCATTCAGCCAGTTTTAGCTCC
CCAATGGGCAGCACAGAGGACCTGAATTCCAAAGGAAGCCTCAGCATGGACCAGGGAGATGATAAAAGCAATGAG
CTTGTAATGAGCTGTCCATATTTTCGGAATGAGATAGGTGGAGAAGGGGAGAGGAAATCAGCCTTTCAAAATCA
AATTCTGGCTCCTTTAGTGGATGTGAAAGTGCCTCCTTTGAGTCTACCCTTAGTTCCCATTGCACAAATGCAGGA
GTGGCAGTACTTGAAGTGCCCAAGGAGAACTTGGTGTTGCACCTAGATAGAGTGAAAAGATACATCGTGGAACAC
GTAGATCTGGGTGCATACTATTATAGAAAATTTTTCTACCAGAAGGAACACTGGAACTATTTTGGGGCTGATGAG
AATCTTGGTCCAGTGGCTGTGAGCATTCGAAGGGAAAAACCAGATGAAATGAAAGAAATGGATCTCCGTACAAC
TACCGAATAATTTTTAGAACTAGTGAGCTCATGACACTGAGAGGTTCGGTCCTGGAGGACGCCATTCCGTCGACA
GCCAAGCACTCGACAGCCAGAGGCCTGCCTCTCAAAGAAGTGCTGGAGCACGTGGTTCCTGAGCTCAATGTCCAG
TGCCTGCGGTTGGCCTTCAACACACCCAAGGTCACAGAGCAGCTCATGAAACTGGATGAACAAGGGCTGAACTAC
CAGCAGAAAGTAGGCATCATGTACTGCAAAGCTGGACAGAGCACTGAAGAAGAGATGTACAACAATGAGTCAGCT
GGCCCAGCCTTTGAAGAATTCCTTCAACTATTGGGAGAGCGAGTTCGGCTCAAAGGATTTGAGAAGTATCGAGCA
CAGCTTGATACCAAAACTGACTCCACTGGAACCCATTCTCTGTACACAACATACAAAGATTATGAAATTATGTTC
CATGTTTCTACCATGCTGCCATACACACCCAACAACAAACAACAGCTCCTGAGGAAGCGGCACATTGGAAATGAT
ATCGTAACAATTGTTTTCCAAGAGCCTGGAGCACAGCCATTCAGCCCAAAAAACATCCGATCCCACTTCCAGCAC
GTTTTCGTCATCGTCAGGGTGCACAATCCGTGCTCTGACAGTGTCTGTTATAGTGTGGCTGTTACCAGGTCCAGA
GATGTGCCTTCCTTTGGGCCTCCCATTCCTAAAGGGGTCACTTTCCCTAAGTCAAATGTGTTCAGGGACTTCCTT
TTGGCGAAAGTGATTAATGCAGAAAATGCTGCTCATAAATCGGAGAAGTTTCGGGCCATGGCAACTCGGACCCGC
CAGGAATACCTGAAAGATCTGGCAGAAAAGAATGTCACCAACACCCCTATCGACCCTTCTGGCAAGTTTCCGTTC
ATCTCTCTGGCTTCCAAGAAGAAGGAAAGTCTAAGCCATATCCAGGAGCCGAGCTCAGCAGCATGGGGGCCATT
GTATGGGCAGTCCGGGCTGAAGACTACAACAAGGCCATGGAACTAGACTGCCTTTTAGGGATCTCCAATGAGTTC
ATTGTGCTCATTGAACAGGAAACAAAGAGCGTGGTCTTCAATTGTTCCTGTAGAGATGTGATAGGGTGGACTTCA
ACTGACACCAGCCTCAAAATCTTCTATGAACGAGGAGAATGTGTTTCAGTGGGTAGTTTATTAACATTGAGGAG
ATCAAAGAGATTGTCAAAAGGTTGCAGTTTGTTTCAAAAGGCTGTGAATCGGTGGAGATGACTCTGCGAAGAAAT
GGGCTAGGACAGCTTGGCTTCCATGTCAACTATGAGGGCATTGTGGCGGATGTGGAGCCCTACGGTTATGCCTGG
CAGGCAGGGCTGAGGCAGGGCAGTCGCCTGGTGGAGATCTGCAAGGTGGCGGTAGCCACTCTGAGCCATGAGCAG
ATGATCGACCTCCTGAGAACATCTGTCACGGTGAAGGTTGTCATCATTCCCCCGCATGATGACTGCACCCCGCGG
AGGAGTTGCTCTGAAACCTACCGCATGCCAGTGATGGAGTACAAAATGAATGAAGGTGTTTCATACGAATTCAAG
TTTCCCTTCCGAAATAATAACAAGTGGCAGAGGAACGCCAGCAAGGGGCCTCATTCACCTCAAGTCCCGTCCCAG

FIGURE 469B

GTGCAGAGTCCCATGACCTCGCGGCTGAATGCTGGAAAAGGAGATGGGAAGATGCCTCCTCCAGAAAGAGCCGCC
AACATCCCTCGAAGCATCTCCAGTGACGGGCGCCCACTAGAGAGGCGGCTGTCTCCTGGTTCGGACATCTATGTG
ACGGTCTCATCCATGGCTTTAGCAAGATCCCAGTGTCGGAACTCTCCTAGCAACTTGTCTTCATCCAGTGATACT
GGTTCTGTGGGGGGCACTTACAGGCAGAAGTCCATGCCCGAAGGGTTTGGAGTGAGCCGTAGATCCCCAGCCTCC
ATTGACAGGCAGAACACCCAGTCAGATATTGGTGGCAGCGGAAAATCCACGCCTAGCTGGCAAAGAAGTGAGGAT
AGCATTGCTGACCAGATGGCTTACAGTTATAGAGGACCTCAGGATTTCAATTCTTTTGTCCTCGAGCAGCATGAA
TATACAGAGCCAACATGCCATCTCCCAGCAGTATCAAAGGTACTGCCAGCTTTCCGAGAGAGCCCCAGTGGGAGA
TTAATGCGGCAGGATCCAGTGGTTCATTTGTCTCCAAACAAACAAGGGCATTCTGATAGCCACTACTCGAGCCAC
TCCAGTAGCAATACTCTCTCCAGCAATGCGTCAAGTGCCCATAGTGATGAGAAGTGGTACGATGGGGACCGCACA
GAATCCGAACTCAACAGCTATAACTATCTGCAAGGCACCTCTGCTGACAGTGGCATTGACACCACCTCTTATGGC
CCCAGCCACGGCAGCACAGCCTCGCTGGGGGCTGCCACATCGTCACCTCGCTCAGGGCCAGGCAAGGAGAAAGTG
GCACCCCTATGGCACAGCTCCAGTGAAGTAATCTCCATGGCAGATCGGACTTTGGAGACAGAGAGCCACGGCCTG
GACCGGAAAACAGAGTCTTCCCTGAGCTTAGACATACACAGCAAGAGCCAAGCCGGCTCGACCCCTCTGACAAGG
GAGAACAGCACCTTCAGTATAAACGATGCTGCTTCCCACACAAGTACCATGAGCTCCCGACACTCTGCCAGCCCA
GTGGTTTTCACCAGTGCCCGGAGTTCACCTAAAGAAGAGCTTCATCCAGCTGCCCCCTCACAGCTCGCACCATCC
TTCTCCTCCTCTTCCTCCTCCTCTGGTCCTAGGAGTTTTTACCCTCGCCAGGGCGCTACTAGCAAGTACCTG
ATTGGATGGAAAAAACCCGAAGGAACCATAAACTCCGTGGGATTTATGGACACGAGAAAGCGTCATCAGAGCGAT
GGCAATGAAATAGCCCACACCAGGCTGCGTGCCTCAACCAGAGACCTCCGGGCATCTCCTAAGCCAACCTCCAAG
TCCACCATTGAAGAAGATCTAAAGAAACTAATTGATCTTGAAAGCCCAACTCCTGAATCACAGAAGAGTTTTAAG
TTCCACGCACTCTCCTCTCCTCAGTCTCCTTTCCCCAGCACCCCCACCTCACGGCGGGCCTTGCACAGAACACTG'
TCGGACGAGAGCATTTACAATAGCCAGAGGGAGCACTTTTTCACCTCCAGGGCGTCACTTCTGGACCAAGCCCTG
CCCAACGACGTCCTCTTCAGTAGCACGTACCCTTCTCTCCCCAAGTCGCTCCCGTTGAGGAGGCCTTCTTACACC
TTAGGAATGAAATCGCTGCATGGAGAGTTCTCAGCCTCGGACAGCTCCCTCACTGACATCCAGGAGACCCGCAGG
CAGCCTATGCCCGACCCTGGCCTGATGCCCCTGCCTGACACTGCTGCAGACTTGGATTGGTCCAACCTGGTAGAT
GCTGCCAAAGCCTATGAGGTCCAGAGAGCCTCATTTTTTGCTGCTAGTGATGAAAACCATCGCCCCTTGAGTGCT
GCATCCAACAGTGATCAGCTGGAGGACCAGGCTCTGGCCCAGATGAAGCCTTACAGCAGCAGTAAAGACTCCTCT
CCCACTCTGGCTTCTAAAGTGGACCAGCTGGAAGGTATGCTGAAGATGCTTCGGGAAGATTTGAAGAAGGAAAAA
GAAGACAAAGCTCACCTTCAGGCGGAGGTGCAGCACCTGCGAGAGGACAACCTGAGGCTACAGGAGGAGTCCCAG
AACGCCTCGGACAAGCTGAAGAAGTTCACAGAATGGGTCTTCAACACCATAGACATGAGC**TAG**GAAGGCTGAGG
AGGACAGGAGAAGGGCCCAGACACTCCCTCCAGTGAGTGTCCTGCAGCCCTTATTCCCTCCATAGAAAGCATCCT
CAGAGCACCTTCCCTGGCTTCCTACTCTGCCCCCTTTCGGGGAGTGCACAACACAATAGTTGCAGATCAACAATC
ATCACCTGCCTTTTGTAGAAAAGAAAAACAAAAAAAGTAAATAAAAATTTTAAACAGTAAAATAAAAGTTTAACT
GCTAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 470

MTSLKRSQTERPLATDRASVVGTDGTPKVHTDDFYMRRFRSQNGSLGSSVMAPVGPPRSEGSHHITSTPGVPKMG
VRARIADWPPRKENIKESSRSSQEIETSSCLDSLSSKSSPVSQGSSVSLNSNDSAMLKSIQNTLKNKTRPSENMD
SRFLMPEAYPSSPRKALRRIRQRSNSDITISELDVDSFDECISPTYKTGPSLHREYGSTSSIDKQGTSGESFFDL
LKGYKDDKSDRGPTPTKLSDFLITGGGKGSGFSLDVIDGPISQRENLRLFKEREKPLKRRSKSETGDSSIFRKLR
NAKGEELGKSSDLEDNRSEDSVRPWTCPKCFAHYDVQSILFDLNEAIMNRHNVIKRRNTTTGASAAAVASLVSGP
LSHSASFSSPMGSTEDLNSKGSLSMDQGDDKSNELVMSCPYFRNEIGGEGERKISLSKSNSGSFSGCESASFEST
LSSHCTNAGVAVLEVPKENLVLHLDRVKRYIVEHVDLGAYYYRKFFYQKEHWNYFGADENLGPVAVSIRREKPDE
MKENGSPYNYRIIFRTSELMTLRGSVLEDAIPSTAKHSTARGLPLKEVLEHVVPELNVQCLRLAFNTPKVTEQLM
KLDEQGLNYQQKVGIMYCKAGQSTEEEMYNNESAGPAFEEFLQLLGERVRLKGFEKYRAQLDTKTDSTGTHSLYT
TYKDYEIMFHVSTMLPYTPNNKQQLLRKRHIGNDIVTIVFQEPGAQPFSPKNIRSHFQHVFVIVRVHNPCSDSVC
YSVAVTRSRDVPSFGPPIPKGVTFPKSNVFRDFLLAKVINAENAAHKSEKFRAMATRTRQEYLKDLAEKNVTNTP
IDPSGKFPFISLASKKKEKSKPYPGAELSSMGAIVWAVRAEDYNKAMELDCLLGISNEFIVLIEQETKSVVFNCS
CRDVIGWTSTDTSLKIFYERGECVSVGSFINIEEIKEIVKRLQFVSKGCESVEMTLRRNGLGQLGFHVNYEGIVA
DVEPYGYAWQAGLRQGSRLVEICKVAVATLSHEQMIDLLRTSVTVKVVIIPPHDDCTPRRSCSETYRMPVMEYKM
NEGVSYEFKFPFRNNNKWQRNASKGPHSPQVPSQVQSPMTSRLNAGKGDGKMPPPERAANIPRSISSDGRPLERR
LSPGSDIYVTVSSMALARSQCRNSPSNLSSSSDTGSVGGTYRQKSMPEGFGVSRRSPASIDRQNTQSDIGGSGKS
TPSWQRSEDSIADQMAYSYRGPQDFNSFVLEQHEYTEPTCHLPAVSKVLPAFRESPSGRLMRQDPVVHLSPNKQG
HSDSHYSSHSSSNTLSSNASSAHSDEKWYDGDRTESELNSYNYLQGTSADSGIDTTSYGPSHGSTASLGAATSSP
RSGPGKEKVAPLWHSSSEVISMADRTLETESHGLDRKTESSLSLDIHSKSQAGSTPLTRENSTFSINDAASHTST
MSSRHSASPVVFTSARSSPKEELHPAAPSQLAPSFSSSSSSSSGPRSFYPRQGATSKYLIGWKKPEGTINSVGFM
DTRKRHQSDGNEIAHTRLRASTRDLRASPKPTSKSTIEEDLKKLIDLESPTPESQKSFKFHALSSPQSPFPSTPT
SRRALHRTLSDESIYNSQREHFFTSRASLLDQALPNDVLFSSTYPSLPKSLPLRRPSYTLGMKSLHGEFSASDSS
LTDIQETRRQPMPDPGLMPLPDTAADLDWSNLVDAAKAYEVQRASFFAASDENHRPLSAASNSDQLEDQALAQMK
PYSSSKDSSPTLASKVDQLEGMLKMLREDLKKEKEDKAHLQAEVQHLREDNLRLQEESQNASDKLKKFTEWVFNT
IDMS

FIGURE 471

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CGGAGGTGAGGTTTGTTACCGCGATTCTGAGAGGTGGGCTTTTAGTCCCTCCAGACCTCGGCTTTAGTGCTGTCT
CCGCTTTTCTTTCACCTTCACAGAGGTTCGTGTCTTCCTAAAAGAAGGTTTTATTGGGAGGTAAAGGTCAATGCG
TAGGGGTAGAGTAAG**ATG**TCTTATGGTGAAATTGAAGGTAAATTCTTGGGACCTAGAGAAGAAGTAACGAGTGAG
CCACGCTGTAAAAAATTGAAGTCAACCACAGAGTCGTATGTTTTTCACAATCATAGTAATGCTGATTTTCACAGA
ATCCAAGAGAAAACTGGAAATGATTGGGTCCCTGTGACCATCATTGATGTCAGAGGACATAGTTATTTGCAGGAG
AACAAAATCAAAACTACAGATTTGCATAGACCTTTGCATGATGAGATGCCTGGTAATAGACCAGATGTTATTGAA
TCCATTGATTCACAGGTTTTACAGGAAGCACGTCCTCCATTAGTATCCGCAGACGATGAGATATATAGCACAAGT
AAAGCATTTATAGGACCCATTTACAAACCCCCTGAGAAAAAGAAACGTAATGAAGGGAGGAATGAGGCACATGTT
CTAAATGGTATAAATGACAGAGGAGGACAAAAAGAGAAACAGAAATTTAACTCTGAAAAATCAGAGATTGACAAT
GAATTATTCCAGTTTTACAAAGAAATTGAAGAGCTTGAAAAGGAAAAAGATGGTTTTGAGAACAGTTGTAAAGAA
TCTGAACCTTCTCAGGAACAATTTGTTCCATTTTATGAGGGTCATAATAATGGTCTCTTAAAACCTGATGAAGAA
AAGAAAGATCTTAGTAATAAAGCTATGCCATCACATTGTGATTATCAGCAGAACTTGGGGAATGAGCCAGACAAA
TATCCCTGTAATGGACAAGTAATACCTACATTTTGTGACACTTCATTTACTTCTTTCAGGCCTGAATGGCAGTCA
GTATATCCTTTTATAGTGCCCTATGGTCCCCCTCTTCCCAGTTTGAACTATCATTTAAACATTCAGAGATTCAGT
GGTCCACCAAATCCACCATCAAATATTTTCCAAGCCCAAGATGACTCTCAGATACAAAATGGATATTATGTAAAT
AATTGTCATGTTAACTGGAATTGCATGACTTTTGATCAGAACAATGAATATACTGACTGTAGTGAGAATAGGAGT
AGTGTTCATCCCTCTGGAAATGGCTGCAGTATGCAAGATCGATATGTGAGTAATGGTTTCTGTGAAGTCAGAGAA
AGATGCTGGAAAGATCATTGTATGGACAAGCATAATGGAACAGACAGGTTTGTGAACCAGCAGTTTCAAGAGGAA
AAGTTAAATAAATTGCAGAAGTTACTTATTCTTTTAAGAGGTCTGCCTGGTTCTGGGAAAACAACATTGTCTCGA
.ATTCTGCTTGGTCAGAATCGTGATGGCATTGTGTTCAGCACTGATGACTATTTTCACCATCAAGATGGGTACAGG
TATAATGTTAATCAACTTGGTGATGCCCATGACTGGAACCAGAACAGAGCAAAACAAGCTATCGATCAGGGAAGA
TCTCCAGTTATAATAGATAACACTAATATACAAGCTTGGGAAATGAAGCCATATGTGGAAGTGGCCATAGGAAAA
GGATACAGAGTAGAGTTTCATGAACCTGAAACTTGGTGGAAATTTGATCCTGAAGAATTAGAAAAGAGGAATAAA
CATGGTGTGTCTCGAAAGAAGATTGCTCAGATGTTGGATCGTTATGAATATCAAATGTCCATTTCTATTGTAATG
AATTCAGTGGAACCATCACACAAAAGCACACAAAGACCTCCTCCTCCACAGGGGAGACAGAGGTGGGGAGGCTCT
CTTGGCTCACATAATCGTGTCTGTGTCACAAATAATCAT**TAA**ATTAGCTATTTTCAGCTAACACATTTGTTGTTG
CACTTGAAAAAGAGTTAGTGAGCCTGTCTTGGAGTTTAAGTAGTTTCAAATAAAAAAAGGCTACAGTGCCTCACA
AAGGATGTTCCCAGCAAGTTGTTTAAATTCCCAGCAAGTTGTTAAAGTGTAAATAAAAATATATGAAATTGTATT
TTAAATGTTTTTATATTCTCTTGTTGTAATACTCTTGGCTGTTATGGAAGCACCTGAGTAATAGAGTGGTGGGTA
GGAGCTAGGATGTTTTTCTACAATCGAATTTTAAACTAATTTATCTATTTTATAGACACTATTGAACAGTTTTTT
AATAGTTCATATCTAAATCTAACTTTTCATAAAACTTTACGGTTTTTCCTTCACTACCTTAAATATGCAAGAAAT
ACTGACTTGGTATAGGGTACCTTAGTTTTCTCTATTCATTAGACAGGTAAAATTATATTTCAGCTGATTGATCTG
TGTGACAAAATTATTTCTTAGCTATAATCAGCACATCACTTAGTTCAAACAAAATTCCCCAGCAAATGTTAGATA
GTAGGTATATCAGTCACCTGGGGAGTTTTCTTCATAATATGCATATTCATCTTGTAATGCATACATAGTTATCAT
CCTCCTTCTCAACCCATCTCCCTAACCCCACATGCTTGCCAGTTCTTGAAGGGATAAAGTGATTCTAATAATGTT
.TTACTTCTCTCTGTTCAATTTAATGTGATATAATTCTAGTATAAAAATATTTTGGACAGTTGCTTAACATGGTCA
TAAGAGGATTTGTACTATAGAATATCTTCTAGTACTAATTTTTCTGTAGAGCAAATTATATTTCTCTCACTGGAT
AGTTTTTAGATGTGTTTCTTCATATAAAATTAAAAACTGAGATGGAATTC
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FIGURE 472

MSYGEIEGKFLGPREEVTSEPRCKKLKSTTESYVFHNHSNADFHRIQEKTGNDWVPVTIIDVRGHSYLQENKIKT
TDLHRPLHDEMPGNRPDVIESIDSQVLQEARPPLVSADDEIYSTSKAFIGPIYKPPEKKKRNEGRNEAHVLNGIN
DRGGQKEKQKFNSEKSEIDNELFQFYKEIEELEKEKDGFENSCKESEPSQEQFVPFYEGHNNGLLKPDEEKKDLS
NKAMPSHCDYQQNLGNEPDKYPCNGQVIPTFCDTSFTSFRPEWQSVYPFIVPYGPPLPSLNYHLNIQRFSGPPNP
PSNIFQAQDDSQIQNGYYVNNCHVNWNCMTFDQNNEYTDCSENRSSVHPSGNGCSMQDRYVSNGFCEVRERCWKD
HCMDKHNGTDRFVNQQFQEEKLNKLQKLLILLRGLPGSGKTTLSRILLGQNRDGIVFSTDDYFHHQDGYRYNVNQ
LGDAHDWNQNRAKQAIDQGRSPVIIDNTNIQAWEMKPYVEVAIGKGYRVEFHEPETWWKFDPEELEKRNKHGVSR
KKIAQMLDRYEYQMSISIVMNSVEPSHKSTQRPPPPQGRQRWGGSLGSHNRVCVTNNH

FIGURE 473

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GGCGGCGGCAGCGGGTTCGGTTGCGCGTGGCGCACGGGGTGGGAGCGGAGCCCAGGCCGGGAGCAGGCGCCGCCG
CCAGCGACCATGGGGAACGTGTTGGCTGCCAGCTCGCCGCCCGCAGGGCCGCCACCGCCGCCTGCGCCGGCCCTC
GTGGGGCTGCCGCCACCTCCGCCCTCGCCGCCGGGCTTCACGCTGCCGCCGCTGGGAGGCAGCCTGGGCGCCGGC
ACCAGTACGAGTCGAAGTTCGGAACGGACCCCCGGGGCTGCAACCGCCAGCGCCTCAGGGGCCGCCGAGGATGGG
GCCTGCGGCTGCCTGCCCAACCCGGGCACATTCGAGGAGTGCCACCGGAAGTGCAAGGAGCTGTTTCCCATTCAG
ATGGAGGGTGTCAAGCTCACAGTCAACAAAGGGTTGAGTAACCATTTTCAGGTCAACCACACAGTAGCCCTCAGC
ACAATCGGGGAGTCCAACTACCACTTCGGGGTCACATATGTGGGGACAAAGCAGCTGAGTCCCACAGAGGCGTTC
CCTGTACTGGTGGGTGACATGGACAACAGTGGCAGTCTCAACGCTCAGGTCATTCACCAGCTGGGCCCCGGTCTC
AGGTCCAAGATGGCCATCCAGACCCAGCAGTCGAAGTTTGTGAACTGGCAGGTGGACGGGGAGTATCGGGGCTCT
GACTTCACAGCAGCCGTCACCCTGGGGAACCCAGACGTCCTCGTGGGTTCAGGAATCCTCGTAGCCCACTACCTC
CAGAGCATCACGCCTTGCCTGGCCCTGGGTGGAGAGCTGGTCTACCACCGGCGGCCTGGAGAGGAGGGCACTGTC
ATGTCTCTAGCTGGGAAATACACATTGAACAACTGGTTGGCAACGGTAACGTTGGGCCAGGCGGGCATGCACGCA
ACATACTACCACAAAGCCAGTGACCAGCTGCAGGTGGGTGTGGAGTTTGAGGCCAGCACAAGGATGCAGGACACC
AGCGTCTCCTTCGGGTACCAGCTGGACCTGCCCAAGGCCAACCTCCTCTTCAAAGGCTCTGTGGATAGCAACTGG
ATCGTGGGTGCCACGCTGGAGAAGAAGCTCCCACCCCTGCCCCTGACACTGGCCCTTGGGGCCTTCCTGAATCAC
CGCAAGAACAAGTTTCAGTGTGGCTTTGGCCTCACCATCGGCTGAGCCCTCCTGGCCCCCGCCTTCCACGCCCTT
CCGATTCCACCTCCACCTCCACCTCCCCCTGCCACAGAGGGGAGACCTGAGCCCCCCTCCCTTCCCTCCCCCCTT
GGGGGTCGGGGGGGGACATTGGAAAGGAGGGACCCCGCCACCCCAGCAGCTGAGGAGGGGATTCTGGAACTGAAT
GGCGCTTCGGGATTCTGAGTAGCAGGGGCAGCATGCCCAGTGGGCCTGGGGTCCCGGGAGGGATTCCGGAATTGA
GGGGCACGCAGGATTCTGAGCACCAGGGGCAGAGGCGGCCAGACAACCTCAGGGAGGAGTGTCCTGGCGTCCCCA
TCCTCCAAAGGGCCTGGGCCCGCCCCGAGGGGGCAGCGAGAGGAGCTTCCCCATCCCCGGTCAGTCCACCCTGCC
CCGTCCACTTTCCCATCTCCTCGGTATAAATCATGTTTATAAGTTATGGAAGAACCGGGACATTTTACAGAAAAA
AAACAAAAAACAACAAAAAATATACGTGGGAAAAAAAAAAAAAAAAAAAAA
```

FIGURE 474

MGNVLAASSPPAGPPPPPAPALVGLPPPPPSPPGFTLPPLGGSLGAGTSTSRSSERTPGAATASASGAAEDGACG
CLPNPGTFEECHRKCKELFPIQMEGVKLTVNKGLSNHFQVNHTVALSTIGESNYHFGVTYVGTKQLSPTEAFPVL
VGDMDNSGSLNAQVIHQLGPGLRSKMAIQTQQSKFVNWQVDGEYRGSDFTAAVTLGNPDVLVGSGILVAHYLQSI
TPCLALGGELVYHRRPGEEGTVMSLAGKYTLNNWLATVTLGQAGMHATYYHKASDQLQVGVEFEASTRMQDTSVS
FGYQLDLPKANLLFKGSVDSNWIVGATLEKKLPPLPLTLALGAFLNHRKNKFQCGFGLTIG

FIGURE 475

GCAGAGGCGCAGGTAG**ATG**GAGTTGGGGAGTTGCCTGGAGGGCGGGAGGGAGGCGGCGGAGGAAGAGGGCGAGCC
TGAGGTGAAAAAGCGGCGACTTCTGTGTGTGAGGTTTGCCTCGGTCGCAAGCTGCGATGCCGCAGTGGCTCAGTG
CTTCCTGGCCGAGAACGACTGGGAGATGGAAAGGGCTCTGAACTCCTACTTCGAGCCTCCGGTGGAGGAGAGCGC
CTTGGAACGCCGACCTGAAACCATCTCTGAGCCCAAGACCTATGTTGACCTAACCAATGAAGAAACAACTGATTC
CACCACTTCTAAAATCAGCCCATCTGAAGATACTCAGCAAGAAAATGGCAGCATGTTCTCTCTCATTACCTGGAA
TATTGATGGATTAGATCTAAACAATCTGTCAGAGAGGGCTCGAGGGGTGTGTTCCTACTTAGCTTTGTACAGCCC
AGATGTGATATTTCTACAGGAAGTTATTCCCCCATATTATAGCTACCTAAAGAAGAGATCAAGTAATTATGAGAT
TATTACAGGTCATGAAGAAGGATATTTCACAGCTATAATGTTGAAGAAATCAAGAGTGAAATTAAAAAGCCAAGA
GATTATTCCTTTTCCAAGTACCAAAATGATGAGAAACCTTTTATGTGTGCATGTGAACGTGTCAGGAAATGAGCT
TTGCCTTATGACATCCCATTTGGAGAGCACCAGAGGGCATGCTGCGGAACGAATGAATCAGTTAAAAATGGTTTT
AAAGAAAATGCAAGAGGCTCCAGAGTCAGCTACAGTTATATTTGCAGGAGATACAAATCTAAGGGATCGAGAGGT
TACCAGATGTGGTGGTTTACCCAACAACATTGTGGATGTCTGGGAGTTTTTGGGCAAACCTAAACATTGCCAGTA
TACATGGGATACACAAATGAACTCTAATCTTGGAATAACTGCTGCTTGTAAACTTCGTTTTGATCGAATATTTTT
CAGAGCAGCAGCAGAAGAGGGACACATTATTCCCCGAAGTTTGGACCTTCTTGGATTAGAAAAACTGGACTGTGG
TAGATTTCCTAGTGATCACTGGGGTCTTCTGTGCAACTTAGATATAATATTG**TAA**AATGCTTTTCAAGTGTGGGT
TTTGCCCTGATTGTTGCAAATACAATTTCCACCTTCTGGAAAGGTAGGTTTGCTGTGGAGGAAATAATGTACTAG
ATCATTGTCACAGAAAAACCAACTATGATTTATGGTTGTGTTTTCAGAATTCAACATTAAAGATTAATGTTTATT
TAAACGAACACATTCCTGCATTCAGGATGTGAGGCCATTTAATAAAAAGGGCACAAAGCCTGTCAGAGTTTTCAA
CGGTGCTTATAGCTGCCAGCTGGATTCCAAACAGGTACCCCATTGTCTCTGAGCTAATGTTTATATTTTTCCATT
CAGGCACCGAAATAGTTAATATTTAAAATAAGTCTTCAAAAGAAACATAAGAGATTATTGAGTTCTTGGGACTG
GATCCTTTATTTCATAAGTTCAGATCATCTTAAATGAAAATGCCATGATTATCTGCAGTTAAGTAGATGACAGCT
ATTCTACATCAGACTTGATTTTTGTCAGCTAATTACATAATTGGTAAGCTATAATTGAAACCTTATGGCTTAAAA
TTCCTTAACTCCTTTTTGATTCATGTTTGTAGTCATGTTGTCAACAGAGGCAAAGTTAAGCTTGATGATGGTTAA
AATCGGTTTGATAGCACCATGGGACATTTTTCTAACAAAAATAAATGCATGAAGAGACATAGCCTTTTAGTTTTG
CTAATTGTGAAATGGAAATGCTTTACAGGAAGTAAATGCAAATTACTTTTAAGTGTGCTTTAAAGAAAAATATTT
TCCCCACAAGAGAAATTTAAATAAAGAATTTTATTTGTTTAAAAAAAAAAAAAAAAAAAAAA

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FIGURE 476

MELGSCLEGGREAAEEEGEPEVKKRRLLCVRFASVASCDAAVAQCFLAENDWEMERALNSYFEPPVEESALERRP
ETISEPKTYVDLTNEETTDSTTSKISPSEDTQQENGSMFSLITWNIDGLDLNNLSERARGVCSYLALYSPDVIFL
QEVIPPYYSYLKKRSSNYEIITGHEEGYFTAIMLKKSRVKLKSQEIIPFPSTKMMRNLLCVHVNVSGNELCLMTS
HLESTRGHAAERMNQLKMVLKKMQEAPESATVIFAGDTNLRDREVTRCGGLPNNIVDVWEFLGKPKHCQYTWDTQ
MNSNLGITAACKLRFDRIFFRAAAEEGHIIPRSLDLLGLEKLDCGRFPSDHWGLLCNLDIIL

FIGURE 477

CGCGCTTGTGGAGCTGGTGGCGGCGCTCCGCAGGGGCTCGGCTGTTTTCCGCGCGGCAGGCGCGGCC**ATG**GCGCA
GCTGGGAAAGCTGCTCAAGGAGCAGAAGTACGACCGGCAGCTGAGGTTGTGGGGTGATCATGGGCAAGAGGCTTT
AGAATCTGCTCATGTTTGCCTAATAAATGCAACAGCCACAGGAACTGAAATTCTTAAAAACTTGGTACTACCAGG
TATTGGTTCGTTTACAATTATTGATGGAAATCAGGTCAGCGGAGAAGATGCTGGAAACAATTTCTTCCTTCAAAG
AAGCAGTATCGGCAAGAACCGAGCTGAAGCTGCCATGGAATTCTTACAAGAATTAAATAGCGATGTCTCTGGAAG
TTTTGTGGAAGAGAGTCCAGAAAACCTTCTAGACAATGATCCCTCATTTTTCTGTAGGTTTACTGTTGTAGTTGC
AACTCAGCTTCCTGAAAGCACTTCACTACGCTTAGCAGATGTCCTCTGGAATTCCCAGATTCCTCTTTTGATCTG
TAGGACATATGGACTAGTTGGTTATATGAGGATCATTATAAAAGAACATCCAGTAATAGAATCTCATCCAGATAA
TGCATTAGAGGATCTACGACTAGATAAGCCATTTCCTGAACTGAGAGAACATTTTCAGTCCTATGATTTGGATCA
TATGGAAAAAAAGGACCACAGTCATACTCCATGGATTGTGATCATAGCTAAATATTTAGCACAGTGGTATAGTGA
AACAAATGGACGAATACCTAAAACGTATAAAGAAAAAGAGGACTTCAGAGATTTGATTAGACAAGGAATTCTAAA
AAATGAAAATGGGGCTCCAGAAGATGAAGAGAATTTTGAAGAAGCTATTAAAAATGTGAACACAGCACTAAATAC
AACTCAGATCCCAAGCAGTATTGAAGATATATTTAATGATGATCGCTGCATAAATATCACCAAACAGACTCCATC
ATTTTGGATTTTAGCTCGTGCCTTAAAGGAATTTGTGGCCAAAGAGGGTCAAGGAAATTTACCTGTTCGAGGCAC
AATTCCTGATATGATTGCAGATTCAGGCAAATATATAAAACTGCAAACGTTTACCGTGAAAAAGCAAAGAAAGA
TGCTGCCGCTGTGGGTAATCATGTTGCCAAATTGCTGCAGTCCATTGGCCAGGCACCAGAGTCCATTTCAGAGAA
AGAATTAAAATTACTCTGCAGCAATTCTGCATTTCTTCGAGTGGTAAGATGTCGATCCTTAGCTGAAGAATATGG
TTTGGATACAATTAACAAGGATGAAATTATTTCTAGCATGGACAATCCAGATAATGAAATAGTGTTGTACTTAAT
GTTACGGGCTGTTGATAGATTTCATAAACAACAGGGTAGATATCCAGGAGTATCTAACTATCAAGTTGAAGAAGA
TATAGGAAAGTTGAAGTCTTGTCTCACTGGCTTCCTTCAGGAATATGGTTTATCTGTAATGGTGAAAGATGATTA
TGTCCACGAATTTTGCCGATATGGAGCTGCTGAGCCACATACCATTGCTGCATTCTTGGGGGGAGCTGCTGCTCA
AGAGGTCATCAAAATAATCACCAAACAATTTGTAATTTTTAATAATACTTACATTTACAGTGGCATGTCACAAAC
TTCAGCAACTTTCCAGTTG**TAG**AGTAAGCAAGCACCTTAAGTAGTGTGTTAATGATTGAAACTGTAATTGCCTTC
GGGTTGTGCTTTAGTCTGTAAAATTCTAAAGGAGAGCTGCTAAATTGTTTTCTTAATAAACATTTTTCTCATTTG
TAAAAAAAAA

FIGURE 478

MAQLGKLLKEQKYDRQLRLWGDHGQEALESAHVCLINATATGTEILKNLVLPGIGSFTIIDGNQVSGEDAGNNFF
LQRSSIGKNRAEAAMEFLQELNSDVSGSFVEESPENLLDNDPSFFCRFTVVVATQLPESTSLRLADVLWNSQIPL
LICRTYGLVGYMRIIIKEHPVIESHPDNALEDLRLDKPFPELREHFQSYDLDHMEKKDHSHTPWIVIIAKYLAQW
YSETNGRIPKTYKEKEDFRDLIRQGILKNENGAPEDEENFEEAIKNVNTALNTTQIPSSIEDIFNDDRCINITKQ
TPSFWILARALKEFVAKEGQGNLPVRGTIPDMIADSGKYIKLQNVYREKAKKDAAAVGNHVAKLLQSIGQAPESI
SEKELKLLCSNSAFLRVVRCRSLAEEYGLDTINKDEIISSMDNPDNEIVLYLMLRAVDRFHKQQGRYPGVSNYQV
EEDIGKLKSCLTGFLQEYGLSVMVKDDYVHEFCRYGAAEPHTIAAFLGGAAAQEVIKIITKQFVIFNNTYIYSGM
SQTSATFQL

FIGURE 479

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AGGGACAGCCCAGAGGAGGCGTGGCCACGCTGCCGGCGGAAGTGGAGCCCTCCGCGAGCGCGCGAGGCCGCCGGG
GCAGGCGGGGAAACCGGACAGTAGGGGCGGGGCCGGGCCGGCGATGGGGATGCGGGAGCACTACGCGGAGCTGCA
CCCGTGCCCGCCGGAATTGGGGATGCAGAGCAGCGGCAGCGGGTATGGCAGGCAGCCGGCGGGCCGGCCTCCAGC
GCAGGTGCCCGAGAGGCAGGGGCTGGCCTGGGATGCGCGCGCACCTGCCCTCGCCCCGCCCCGCCCGCACGAGGG
GTGGTGGCCGAGGCCCCGCCCCGCACGCCTCGCCTGAGGCGGGTCCGCTCAGCCCAGGCGCCCGCCCCCGCCCCC
GCCGATTAAATGGGCCGGCGGGGCTCAGCCCCCGGAAACGGTCGTAACTTCGGGGCTGCGAGCGCGGAGGGCGAC
GACGACGAAGCGCAGACAGCGTC**ATG**GCAGAGCAGGTGGCCCTGAGCCGGACCCAGGTGTGCGGGATCCTGCGGG
AAGAGCTTTTCCAGGGCGATGCCTTCCATCAGTCGGATACACACATATTCATCATCATGGGTGCATCGGGTGACC
TGGCCAAGAAGAAGATCTACCCCACCATCTGGTGGCTGTTCCGGGATGGCCTTCTGCCCGAAAACACCTTCATCG
TGGGCTATGCCCGTTCCCGCCTCACAGTGGCTGACATCCGCAAACAGAGTGAGCCCTTCTTCAAGGCCACCCCAG
AGGAGAAGCTCAAGCTGGAGGACTTCTTTGCCCGCAACTCCTATGTGGCTGGCCAGTACGATGATGCAGCCTCCT
ACCAGCGCCTCAACAGCCACATGGATGCCCTCCACCTGGGGTCACAGGCCAACCGCCTCTTCTACCTGGCCTTGC
CCCCGACCGTCTACGAGGCCGTCACCAAGAACATTCACGAGTCCTGCATGAGCCAGATAGGCTGGAACCGCATCA
TCGTGGAGAAGCCCTTCGGGAGGGACCTGCAGAGCTCTGACCGGCTGTCCAACCACATCTCCTCCCTGTTCCGTG
AGGACCAGATCTACCGCATCGACCACTACCTGGGCAAGGAGATGGTGCAGAACCTCATGGTGCTGAGATTTGCCA
ACAGGATCTTCGGCCCCATCTGGAACCGGGACAACATCGCCTGCGTTATCCTCACCTTCAAGGAGCCCTTTGGCA
CTGAGGGTCGCGGGGGCTATTTCGATGAATTTGGGATCATCCGGGACGTGATGCAGAACCACCTACTGCAGATGC
TGTGTCTGGTGGCCATGGAGAAGCCCGCCTCCACCAACTCAGATGACGTCCGTGATGAGAAGGTCAAGGTGTTGA
AATGCATCTCAGAGGTGCAGGCCAACAATGTGGTCCTGGGCCAGTACGTGGGGAACCCCGATGGAGAGGGCGAGG
CCACCAAAGGGTACCTGGACGACCCCACGGTGCCCCGCGGGTCCACCACCGCCACTTTTGCAGCCGTCGTCCTCT
ATGTGGAGAATGAGAGGTGGGATGGGGTGCCCTTCATCCTGCGCTGCGGCAAGGCCCTGAACGAGCGCAAGGCCG
AGGTGAGGCTGCAGTTCCATGATGTGGCCGGCGACATCTTCCACCAGCAGTGCAAGCGCAACGAGCTGGTGATCC
GCGTGCAGCCCAACGAGGCCGTGTACACCAAGATGATGACCAAGAAGCCGGGCATGTTCTTCAACCCCGAGGAGT
CGGAGCTGGACCTGACCTACGGCAACAGATACAAGAACGTGAAGCTCCCTGACGCCTACGAGCGCCTCATCCTGG
ACGTCTTCTGCGGGAGCCAGATGCACTTCGTGCGCAGCGACGAGCTCCGTGAGGCCTGGCGTATTTTCACCCCAC
TGCTGCACCAGATTGAGCTGGAGAAGCCCAAGCCCATCCCCTATATTTATGGCAGCCGAGGCCCCACGGAGGCAG
ACGAGCTGATGAAGAGAGTGGGTTTCCAGTATGAGGGCACCTACAAGTGGGTGAACCCCCACAAGCTC**TGA**GCCC
TGGGCACCCACCTCCACCCCGCCACGGCCACCTCCTTCCCGCCGCCCGACCCCGAGTCGGGAGGACTCCGGGA
CCATTGACCTCAGCTGCACATTCCTGGCCCCGGGCTCTGGCCACCCTGGCCCGCCCCTCGCTGCTGCTACTACCC
GAGCCCAGCTACATTCCTCAGCTGCCAAGCACTCGAGACCATCCTGGCCCCTCCAGACCCTGCCTGAGCCCAGGA
GCTGAGTCACCTCCTCCACTCACTCCAGCCCAACAGAAGGAAGGAGGAGGGCGCCCATTCGTCTGTCCCAGAGCT
TATTGGCCACTGGGTCTCACTCCTGAGTGGGGCCAGGGTGGGAGGGAGGGACAAGGGGGAGGAAAGGGGCGAGCA
CCCACGTGAGAGAATCTGCCTGTGGCCTTGCCCGCCAGCCTCAGTGCCACTTGACATTCCTTGTCACCAGCAACA
TCTCGAGCCCCCTGGATGTCCCCTGTCCCACCAACTCTGCACTCCATGGCCACCCCGTGCCACCCGTAGGCAGCC
TCTCTGCTATAAGAAAAGCAGACGCAGCAGCTGGGACCCCTCCCAACCTCAATGCCCTGCCATTAAATCCGCAAA
CAGCCAAAAAAAAAAAAAAAAAAAA
```

FIGURE 480

MAEQVALSRTQVCGILREELFQGDAFHQSDTHIFIIMGASGDLAKKKIYPTIWWLFRDGLLPENTFIVGYARSRL
TVADIRKQSEPFFKATPEEKLKLEDFFARNSYVAGQYDDAASYQRLNSHMDALHLGSQANRLFYLALPPTVYEAV
TKNIHESCMSQIGWNRIIVEKPFGRDLQSSDRLSNHISSLFREDQIYRIDHYLGKEMVQNLMVLRFANRIFGPIW
NRDNIACVILTFKEPFGTEGRGGYFDEFGIIRDVMQNHLLQMLCLVAMEKPASTNSDDVRDEKVKVLKCISEVQA
NNVVLGQYVGNPDGEGEATKGYLDDPTVPRGSTTATFAAVVLYVENERWDGVPFILRCGKALNERKAEVRLQFHD
VAGDIFHQQCKRNELVIRVQPNEAVYTKMMTKKPGMFFNPEESELDLTYGNRYKNVKLPDAYERLILDVFCGSQM
HFVRSDELREAWRIFTPLLHQIELEKPKPIPYIYGSRGPTEADELMKRVGFQYEGTYKWVNPHKL

FIGURE 481

AGCTGAGGTGTGAGCAGCTGCCGAAGTCAGTTCCTTGTGGAGCCGGAGCTGGGCGCGGATTCGCCGAGGCACCGA
GGCACTCAGAGGAGGTGAGAGAGCGGCGGCAGACAACAGGGGACCCCGGGCCGGCGGCCCAGAGCCGAGCCAAGC
GTGCCCGCGTGTGTCCCTGCGTGTCCGCGAGGATGCGTGTTCGCGGGTGTGTGCTGCGTTCACAGGTGTTTCTGC
GGCAGGCGCC**ATG**TCAGAACCGGCTGGGGATGTCCGTCAGAACCCATGCGGCAGCAAGGCCTGCCGCCGCCTCTT
CGGCCCAGTGGACAGCGAGCAGCTGAGCCGCGACTGTGATGCGCTAATGGCGGGCTGCATCCAGGAGGCCCGTGA
GCGATGGAACTTCGACTTTGTCACCGAGACACCACTGGAGGGTGACTTCGCCTGGGAGCGTGTGCGGGGCCTTGG
CCTGCCCAAGCTCTACCTTCCCACGGGGCCCCGGCGAGGCCGGGATGAGTTGGGAGGAGGCAGGCGGCCTGGCAC
CTCACCTGCTCTGCTGCAGGGGACAGCAGAGGAAGACCATGTGGACCTGTCACTGTCTTGTACCCTTGTGCCTCG
CTCAGGGGAGCAGGCTGAAGGGTCCCCAGGTGGACCTGGAGACTCTCAGGGTCGAAAACGGCGGCAGACCAGCAT
GACAGATTTCTACCACTCCAAACGCCGGCTGATCTTCTCCAAGAGGAAGCCC**TAA**TCCGCCCACAGGAAGCCTGC
AGTCCTGGAAGCGCGAGGGCCTCAAAGGCCCGCTCTACATCTTCTGCCTTAGTCTCAGTTTGTGTGTCTTAATTA
TTATTTGTGTTTTAATTTAAACACCTCCTCATGTACATACCCTGGCCGCCCCCTGCCCCCCAGCCTCTGGCATTA
GAATTATTTAAACAAAAACTAGGCGGTTGAATGAGAGGTTCCTAAGAGTGCTGGGCATTTTTATTTTATGAAATA
CTATTTAAAGCCTCCTCATCCCGTGTTCTCCTTTTCCTCTCTCCCGGAGGTTGGGTGGGCCGGCTTCATGCCAGC
TACTTCCTCCTCCCCACTTGTCCGCTGGGTGGTACCCTCTGGAGGGGTGTGGCTCCTTCCCATCGCTGTCACAGG
CGGTTATGAAATTCACCCCCTTTCCTGGACACTCAGACCTGAATTCTTTTTCATTTGAGAAGTAAACAGATGGCA
CTTTGAAGGGGCCTCACCGAGTGGGGGCATCATCAAAAACTTTGGAGTCCCCTCACCTCCTCTAAGGTTGGGCAG
GGTGACCCTGAAGTGAGCACAGCCTAGGGCTGAGCTGGGGACCTGGTACCCTCCTGGCTCTTGATACCCCCCTCT
GTCTTGTGAAGGCAGGGGGAAGGTGGGGTCCTGGAGCAGACCACCCCGCCTGCCCTCATGGCCCCTCTGACCTGC
ACTGGGGAGCCCGTCTCAGTGTTGAGCCTTTTCCCTCTTTGGCTCCCCTGTACCTTTTGAGGAGCCCCAGCTACC
CTTCTTCTCCAGCTGGGCTCTGCAATTCCCCTCTGCTGCTGTCCCTCCCCCTTGTCCTTTCCCTTCAGTACCCTC
TCAGCTCCAGGTGGCTCTGAGGTGCCTGTCCCACCCCCACCCCCAGCTCAATGGACTGGAAGGGGAAGGGACACA
CAAGAAGAAGGGCACCCTAGTTCTACCTCAGGCAGCTCAAGCAGCGACCGCCCCCTCCTCTAGCTGTGGGGGTGA
GGGTCCCATGTGGTGGCACAGGCCCCCTTGAGTGGGGTTATCTCTGTGTTAGGGGTATATGATGGGGGAGTAGAT
CTTTCTAGGAGGGAGACACTGGCCCCTCAAATCGTCCAGCGACCTTCCTCATCCACCCCATCCCTCCCCAGTTCA
TTGCACTTTGATTAGCAGCGGAACAAGGAGTCAGACATTTTAAGATGGTGGCAGTAGAGGCTATGGACAGGGCAT
GCCACGTGGGCTCATATGGGGCTGGAGTAGTTGTCTTTCCTGGCACTAACGTTGAGCCCCTGGAGGCACTGAAG
TGCTTAGTGTACTTGGAGTATTGGGGTCTGACCCCAAACACCTTCCAGCTCCTGTAACATACTGGCCTGGACTGT
TTTCTCTCGGCTCCCCATGTGTCCTGGTTCCCGTTTCTCCACCTAGACTGTAAACCTCTCGAGGGCAGGGACCAC
ACCCTGTACTGTTCTGTGTCTTTCACAGCTCCTCCCACAATGCTGAATATACAGCAGGTGCTCAATAAATGATTC
TTAGTGACTTTAAAAAAAAAAAAAAAAAAAAA

FIGURE 482

MSEPAGDVRQNPCGSKACRRLFGPVDSEQLSRDCDALMAGCIQEARERWNFDFVTETPLEGDFAWERVRGLGLPK
LYLPTGPRRGRDELGGGRRPGTSPALLQGTAEEDHVDLSLSCTLVPRSGEQAEGSPGGPGDSQGRKRRQTSMTDF
YHSKRRLIFSKRKP

FIGURE 483

GTGGAACCTCGATATTGGTGGTGTCCATCGTGGGCAGCGGACTAATAAAGGCC**ATG**GCGCCAGCAGAAATCCTGA
ACGGGAAGGAGATCTCCGCGCAAATAAGGGCGAGACTGAAAAATCAAGTCACTCAGTTGAAGGAGCAAGTACCTG
GTTTCACACCACGCCTGGCAATATTACAGGTTGGCAACAGAGATGATTCCAATCTTTATATAAATGTGAAGCTGA
AGGCTGCTGAAGAGATTGGGATCAAAGCCACTCACATTAAGTTACCAAGAACAACCACAGAATCTGAGGTGATGA
AGTACATTACATCTTTGAATGAAGACTCTACTGTACATGGGTTCTTAGTGCAGCTACCTTTAGATTCAGAGAATT
CCATTAACACTGAAGAAGTGATCAATGCTATTGCACCCGAGAAGGATGTGGATGGATTGACTAGCATCAATGCTG
GGAGACTTGCTAGAGGTGACCTCAATGACTGTTTCATTCCTTGTACGCCTAAGGGATGCTTGGAACTCATCAAAG
AGACAGGGGTGCCGATTGCCGGAAGGCATGCTGTGGTGGTTGGGCGCAGTAAAATAGTTGGGGCCCCGATGCATG
ACTTGCTTCTGTGGAACAATGCCACAGTGACCACCTGCCACTCCAAGACTGCCCATCTGGATGAGGAGGTAAATA
AAGGTGACATCCTGGTGGTTGCAACTGGTCAGCCTGAAATGGTTAAAGGGGAGTGGATCAAACCTGGGGCAATAG
TCATCGACTGTGGAATCAATTATGTCCCAGATGATAAAAAACCAAATGGGAGAAAAGTTGTGGGTGATGTGGCAT
ACGACGAGGCCAAAGAGAGGGCGAGCTTCATCACTCCTGTTCCTGGCGGCGTAGGGCCCATGACAGTTGCAATGC
TCATGCAGAGCACAGTAGAGAGTGCCAAGCGTTTCCTGGAGAAATTTAAGCCAGGAAAGTGGATGATTCAGTATA
CAAACCTTAACCTCAAGACACCTGTTCCAAGTGACATTGATATATCACGATCTTGTAAACCGAAGCCCATTGGTA
AGCTGGCTCGAGAAATTGGTCTGCTGTCTGAAGAGGTAGAATTATATGGTGAAACAAAGGCCAAAGTTCTGCTGT
CAGCACTAGAACGCCTGAAGCACCGGCCTGATGGGAAATACGTGGTGGTGACTGGAATAACTCCAACACCCCTGG
GAGAAGGGAAAAGCACAACTACAATCGGGCTAGTGCAAGCCCTTGGTGCCCATCTCTACCAGAATGTCTTTGCGT
GTGTGCGACAGCCTTCTCAGGGCCCCACCTTTGGAATAAAAGGTGGCGCTGCAGGAGGCGGCTACTCCCAGGTCA
TTCCTATGGAAGAGTTTAATCTCCACCTCACAGGTGACATCCATGCCATCACTGCAGCTAATAACCTCGTTGCTG
CGGCCATTGATGCTCGGATATTTCATGAACTGACCCAGACAGACAAGGCTCTCTTTAATCGTTTGGTGCCATCAG
TAAATGGAGTGAGAAGGTTCTCTGACATCCAAATCCGAAGGTTAAAGAGACTAGGCATTGAAAAGACTGACCCTA
CCACACTGACAGATGAAGAGATAAACAGATTTGCAAGATTGGACATTGATCCAGAAACCATAACTTGGCAAAGAG
TGTTGGATACCAATGATAGATTCCTGAGGAAGATCACGATTGGACAGGCTCCAACGGAGAAGGGTCACACACGGA
CGGCCCAGTTTGATATCTCTGTGGCCAGTGAAATTATGGCTGTCCTGGCTCTCACCACTTCTCTAGAAGACATGA
GAGAGAGACTGGGCAAAATGGTGGTGGCATCCAGTAAGAAAGGAGAGCCCGTCAGTGCCGAAGATCTGGGGGTGA
GTGGTGCACTGACAGTGCTTATGAAGGACGCAATCAAGCCCAATCTCATGCAGACACTGGAGGGCACTCCAGTGT
TTGTCCATGCTGGCCCGTTTGCCAACATCGCACATGGCAATTCCTCCATCATTGCAGACCAGATCGCACTCAAGC
TTGTTGGCCCAGAAGGGTTTGTAGTGACGGAAGCAGGATTTGGAGCAGACATTGGAATGGAAAAGTTTTTTAACA
TCAAATGCCGGTATTCCGGCCTCTGCCCCCACGTGGTGGTGCTTGTTGCCACTGTCAGGGCTCTCAAGATGCACG
GGGGCGGCCCCACGGTCACTGCTGGACTGCCTCTTCCCAAGGCTTACATACAGGAGAACCTGGAGCTGGTTGAAA
AAGGCTTCAGTAACTTGAAGAAACAAATTGAAAATGCCAGAATGTTTGGAATTCCAGTAGTAGTGGCCGTGAATG
CATTCAAGACGGATACAGAGTCTGAGCTGGACCTCATCAGCCGCCTTTCCAGAGAACATGGGGCTTTTGATGCCG
TGAAGTGCACTCACTGGGCAGAAGGGGGCAAGGGTGCCTTAGCCCTGGCTCAGGCCGTCCAGAGAGCAGCACAAG
CACCCAGCAGCTTCCAGCTCCTTTATGACCTCAAGCTCCCAGTTGAGGATAAAATCAGGATCATTGCACAGAAGA
TCTATGGAGCAGATGACATTGAATTACTTCCCGAAGCTCAACACAAAGCTGAAGTCTACACGAAGCAGGGCTTTG
GGAATCTCCCCATCTGCATGGCTAAAACACACTTGTCTTTGTCTCACAACCCAGAGCAAAAAGGTGTCCCTACAG
GCTTCATTCTGCCCATTCGCGACATCCGCGCCAGCGTTGGGGCTGGTTTTCTGTACCCCTTAGTAGGAACGATGA
GCACAATGCCTGGACTCCCCACCCGGCCCTGTTTTTATGATATTGATTTGGACCCTGAAACAGAACAGGTGAATG
GATTATTC**TAA**ACAGATCACCATCCATCTTCAAGAAGCTACTTTGAAAGTCTGGCCAGTGTCTATTCAGGCCCAC
TGGGAGTTAGGAAGTATAAGTAAGCCAAGAGAAGTCAGCCCCTGCCCAGAAGATCTGAAACTAATAGTAGGAGTT
TCCCCAGAAGTCATTTTCAGCCTTAATTCTCATCATGTATAAATTAACATAAATCATGCATGTCTGTTTACTTTA
GTGACGTTCCACAGAATAAAAGGAAACAAGTTTGC

FIGURE 484

MAPAEILNGKEISAQIRARLKNQVTQLKEQVPGFTPRLAILQVGNRDDSNLYINVKLKAAEEIGIKATHIKLPRT
TTESEVMKYITSLNEDSTVHGFLVQLPLDSENSINTEEVINAIAPEKDVDGLTSINAGRLARGDLNDCFIPCTPK
GCLELIKETGVPIAGRHAVVVGRSKIVGAPMHDLLLWNNATVTTCHSKTAHLDEEVNKGDILVVATGQPEMVKGE
WIKPGAIVIDCGINYVPDDKKPNGRKVVGDVAYDEAKERASFITPVPGGVGPMTVAMLMQSTVESAKRFLEKFKP
GKWMIQYNNLNLKTPVPSDIDISRSCKPKPIGKLAREIGLLSEEVELYGETKAKVLLSALERLKHRPDGKYVVVT
GITPTPLGEGKSTTTIGLVQALGAHLYQNVFACVRQPSQGPTFGIKGGAAGGGYSQVIPMEEFNLHLTGDIHAIT
AANNLVAAAIDARIFHELTQTDKALFNRLVPSVNGVRRFSDIQIRRLKRLGIEKTDPTTLTDEEINRFARLDIDP
ETITWQRVLDTNDRFLRKITIGQAPTEKGHTRTAQFDISVASEIMAVLALTTSLEDMRERLGKMVVASSKKGEPV
SAEDLGVSGALTVLMKDAIKPNLMQTLEGTPVFVHAGPFANIAHGNSSIIADQIALKLVGPEGFVVTEAGFGADI
GMEKFFNIKCRYSGLCPHVVVLVATVRALKMHGGGPTVTAGLPLPKAYIQENLELVEKGFSNLKKQIENARMFGI
PVVVAVNAFKTDTESELDLISRLSREHGAFDAVKCTHWAEGGKGALALAQAVQRAAQAPSSFQLLYDLKLPVEDK
IRIIAQKIYGADDIELLPEAQHKAEVYTKQGFGNLPICMAKTHLSLSHNPEQKGVPTGFILPIRDIRASVGAGFL
YPLVGTMSTMPGLPTRPCFYDIDLDPETEQVNGLF

FIGURE 485

CGCGATTCTCAGGGATTGATCCGCCTCTTCAGGTAAGTTATCTTCCGGCCCCGTACCACTGTGCCACAGGCGCAG
CCCGCTTCCTCAGGTGCCCTATCCCGCGCAGAAGACCACGGCTTCACAGAGTGTTATTTAAGGGCGTGGCCAGCG
GAACATCCCGCCCCATTCTGTGACGCACGGGGTGGCGCGCGTGGGACCCGAGGGGTGGGGCTGGGTTTAGTAGGA
GACCTGGGGCAAGGCCCCCTGTGGACGACCATCTGCCAGCTTCTCTCGTTCCGTCGATTGGGAGGAGCGGTGGCG
ACCTCGGCCTTCAGTGTTTCCGACGGAGTGA**ATG**GCGGCGGCGGCTGGGATGCTGCTGCTGGGCTTGCTGCAGGC
GGGTGGGTCGGTGCTGGGCCAGGCGATGGAGAAGGTGACAGGCGGCAACCTCTTGTCCATGCTGCTGATCGCCTG
CGCCTTCACCCTCAGCCTGGTCTACCTGATCCGTCGGCCGCCGGCCACCTGGTCCAGCTGCCCGCAGGGGTGAA
AAGTCCTCCATACATTTTCTCCCCAATTCCATTCCTTGGGCATGCCATAGCATTTGGGAAAAGTCCAATTGAATT
TCTAGAAAATGCATATGAGAAGTATGGACCTGTATTTAGTTTTACCATGGTAGGCAAGACATTTACTTACCTTCT
GGGGAGTGATGCTGCTGCACTGCTTTTTAATAGTAAAAATGAAGACCTGAATGCAGAAGATGTCTACAGTCGCCT
GACAACACCTGTGTTTGGGAAGGGAGTTGCATACGATGTGCCTAATCCAGTTTTCTTGGAGCAGAAGAAAATGTT
AAAAAGTGGCCTTAACATAGCCCACTTTAAACAGCATGTTTCTATAATTGAAAAAGAAACAAAGGAATACTTTGA
GAGTTGGGGAGAAAGTGGAGAAAAAAATGTGTTTGAAGCTCTTTCTGAGCTCATAATTTTAACAGCTAGCCATTG
TTTGCATGGAAAGGAAATCAGAAGTCAACTCAATGAAAAGGTAGCACAGCTGTATGCAGATTTGGATGGAGGTTT
CAGCCATGCAGCCTGGCTCTTACCAGGTTGGCTGCCTTTGCCTAGTTTCAGACGCAGGGACAGAGCTCATCGGGA
AATCAAGGATATTTTCTATAAGGCAATCCAGAAACGCAGACAGTCTCAAGAAAAAATTGATGACATTCTCCAAAC
TTTACTAGATGCTACATACAAGGATGGGCGTCCTTTGACTGATGATGAAGTAGCAGGGATGCTTATTGGATTACT
CTTGGCAGGGCAGCATACATCCTCAACTACTAGTGCTTGGATGGGCTTCTTTTTGGCCAGAGACAAAACACTTCA
AAAAAAATGTTATTTAGAACAGAAAACAGTCTGTGGAGAGAATCTGCCTCCTTTAACTTATGACCAGCTCAAGGA
TCTAAATTTACTTGATCGCTGTATAAAAGAAACATTAAGACTTAGACCTCCTATAATGATCATGATGAGAATGGC
CAGAACTCCTCAGACTGTGGCAGGGTATACCATTCCTCCAGGACATCAGGTGTGTGTTTCTCCCACTGTCAATCA
AAGACTTAAAGACTCATGGGTAGAACGCCTGGACTTTAATCCTGATCGCTACTTACAGGATAACCCAGCATCAGG
GGAAAAGTTTGCCTATGTGCCATTTGGAGCTGGGCGTCATCGTTGTATTGGGGAAAATTTTGCCTATGTTCAAAT
TAAGACAATTTGGTCCACTATGCTTCGTTTATATGAATTTGATCTCATTGATGGATACTTTCCCACTGTGAATTA
TACAACTATGATTCACACCCCTGAGAACCCAGTTATCCGTTACAAACGAAGATCAAAA**TGA**AAAAGGTTGCAAGG
AACGAATATATGTGATTATCACTGTAAGCCACAAAGGCATTCGAAGAGAATGAAGTGTACAAAACAACTCTTGTA
GTTTACTGTTTTTTTAAGTGTGTAATTCTAAAAGCCAGTTTATGATTTAGGATTTTGTTAACTGAATGGTTCTAT
CAAATATAATAGCATTTGACACATTTTCTAATAGTTATGATACTTATACATGTGCTTTCAGGAAGTTCCTTGGTG
AAACAATTGTTGAGGGGGGATCTAGGTAATTGGCAGATTCTAAATAATATAATTTCCAGATAGTAATTTTAAGAG
TACTCATCGCTCTTGCCAAATAAGTTCAGGGTATTCAAATCTTGGACTAGTCCTGCAAGGTATAAAGAATAAAAA
TCCCAGTGAGATACTTGGAAACCACAGTTTATTATTATTTATCTGGGCAATTATTGTGTGTGTGAGGATGGAAGG
GTAGGGAATAATCGAACATCTAAAGCCTTGAATAAGAGAATACTAATTGTTTTGGTATGATGATACTCAGAAATG
GAGATATTATAGGAAAAGAAATCCTTTGGAATTTTAACTAAAATCACTGCATATGGGAAATTAAGAGATCCAGG
ACCATATTTGATAAGAGTTCCTAAAAATAATGTAATTATTAATGCTAAAGACTGCTCATGTATCTTGATCTAATT
ACTAAATAAATTACATATTTATTTACCTGATAA\ATATGTATCTAGTTCTACAAGGTCACATTTATGTGGAAGTCC
AAAGTCAAGTCCTTAGGGGATAATTTTGTTTTGGGCTCAGTTGTTCCCTGCTTCCTTTTTTTTTTTTTTTTTTTT
TTGAGATGGAGTCTCGCTCTGTTGCCCAGGCTGGAGTGCAGTGGTGCGATCTCAGCTCACTGCATCCTCTGCCTC
CCGGGTTCAAGCAATTCTCTGCCTCAGCCTCCCAAGTAGTTGGGATTACAGGCACCTGCCACCATGCCTGGCTAA
TTTTTTGTATTTTTAGTAGAGACGGGGGTTTCACTATGTTGGCTAGGCTGGTCTTGAACTCCTGAGCCTCGTGAG
TCCACCCGCCTTGGCCTCCCAAAGTGCTGGGATTACAGGCATGAGCCACCGCACCTGGCCTTCCCTGCTTCCTCT
CTAGAATCCAATTAGGGATGTTTGTTACTACTCATATTGATTAAAACAGTTAACAAACTTTTTTCTTTTTAAAAT
GTGAGATCAGTGAACTCTGGTTTTAAGATAATCTGAAACAAGGTCCTTGGGAGTAATAAAATTGGTCACATTCTG
TAAAGCACATTCTGTTTAGGAATCAACTTATCTCAAATTGTAACTCGGGGCCTAACTATATGAGATGGCTGAAAA
AATACCACATCGTCTGTTTTCACTAGGTGATGCCAAAATATTTTGCTTTATGTATATTACAGTTCTTTTTAAAAC
ACTGGAAGACTCATGTTAAACTCTAATTGTGAAGGCAGAATCTCTGCTAATTTTTCAGATTAAAATTCTCTTTGA
AAAAAT

FIGURE 486

MAAAAGMLLLGLLQAGGSVLGQAMEKVTGGNLLSMLLIACAFTLSLVYLIRLAAGHLVQLPAGVKSPPYIFSPIP
FLGHAIAFGKSPIEFLENAYEKYGPVFSFTMVGKTFTYLLGSDAAALLFNSKNEDLNAEDVYSRLTTPVFGKGVA
YDVPNPVFLEQKKMLKSGLNIAHFKQHVSIIEKETKEYFESWGESGEKNVFEALSELIILTASHCLHGKEIRSQL
NEKVAQLYADLDGGFSHAAWLLPGWLPLPSFRRRDRAHREIKDIFYKAIQKRRQSQEKIDDILQTLLDATYKDGR
PLTDDEVAGMLIGLLLAGQHTSSTTSAWMGFFLARDKTLQKKCYLEQKTVCGENLPPLTYDQLKDLNLLDRCIKE
TLRLRPPIMIMMRMARTPQTVAGYTIPPGHQVCVSPTVNQRLKDSWVERLDFNPDRYLQDNPASGEKFAYVPFGA
GRHRCIGENFAYVQIKTIWSTMLRLYEFDLIDGYFPTVNYTTMIHTPENPVIRYKRRSK

FIGURE 487

ACCGCCGACGCAGACCCCTCTCTGCACGCCAGCCCGCCCGCACCCACC**ATG**GCCACAGTTCAGCAGCTGGAAGGA
AGATGGCGCCTGGTGGACAGCAAAGGCTTTGATGAATACATGAAGGAGCTAGGAGTGGGAATAGCTTTGCGAAAA
ATGGGCGCAATGGCCAAGCCAGATTGTATCATCACTTGTGATGGTAAAAACCTCACCATAAAAACTGAGAGCACT
TTGAAAACAACACAGTTTTCTTGTACCCTGGGAGAGAAGTTTGAAGAAACCACAGCTGATGGCAGAAAAACTCAG
ACTGTCTGCAACTTTACAGATGGTGCATTGGTTCAGCATCAGGAGTGGGATGGGAAGGAAAGCACAATAACAAGA
AAATTGAAAGATGGGAAATTAGTGGTGGAGTGTGTCATGAACAATGTCACCTGTACTCGGATCTATGAAAAAGTA
GAA**TAA**AAATTCCATCATCACTTTGGACAGGAGTTAATTAAGAGAATGACCAAGCTCAGTTCAATGAGCAAATCT
CCATACTGTTTCTTTCTTTTTTTTTTCATTACTGTGTTCAATTATCTTTATCATAAACATTTTACATGCAGCTAT
TTCAAAGTGTGTTGGATTAATTAGGATCATCCCTTTGGTTAATAAATAAATGTGTTTGTGCT

541/2825
FIGURE 488

MATVQQLEGRWRLVDSKGFDEYMKELGVGIALRKMGAMAKPDCIITCDGKNLTIKTESTLKTTQFSCTLGEKFEE
TTADGRKTQTVCNFTDGALVQHQEWDGKESTITRKLKDGKLVVECVMNNVTCTRIYEKVE

FIGURE 489

TTTTTTTTTTTTTACCATATGCTTATGTTTATTGTACAGTCACAAGTTACATGTTGTAAATCAAGCAGAACACTG
TACCAGTTTTCACTAACTCAAATCAAGTTAGCAAATTACAAATTTTAGAACAGATTCATTTTCTGTCTCACCCAA
TGTGGGTGACCACAAAGATATTTACTTTCTATGTTATTAGGTAGCAAATTAATTTGATATACTACACAGCTTCCA
AGTTACCTTAGGATATTTCAAAGTGTTTCAAAACTGGTAAAGAATAATTCATTTCCAGCCTGAAATACAATGCAG
AATGGACCATTTAGGGGTAAATAACCTCACTTAATCACTCTTTCCTGGCTAACAAAAATAATACCAAATATTTGG
GTTATAATTAGGGCTTACTAAAATTAATGGXCCACTTTGGAAATTATCCAGGATTGGGXTACATTGGGTAAAATG
GCCCCTGGGGGACCATTGGCXAAAAAC

FIGURE 490

TGGCCGAAGCAGGGGGACAGCAAGGGACGCTCAGGCGGGGACC**ATG**GCGGACGGCGGCTCGGAGCGGGCTGACGG
GCGCATCGTCAAGATGGAGGTGGACTACAGCGCCACGGTGGATCAGCGCCTACCCGAGTGTGCGAAGCTAGCCAA
GGAAGGAAGACTTCAAGAAGTCATTGAAACCCTTCTCTCTCTGGAAAAGCAGACTCGTACTGCTTCCGATATGGT
ATCGACATCCCGTATCTTAGTTGCAGTAGTGAAGATGTGCTATGAGGCTAAAGAATGGGATTTACTTAATGAAAA
TATTATGCTTTTGTCCAAAAGGCGGAGTCAGTTAAAACAAGCTGTTGCCAAAATGGTTCAACAGTGCTGTACTTA
TGTTGAGGAAATCACAGACCTTCCTATCAAACTTCGATTAATTGATACTCTACGAATGGTTACCGAAGGCAAGAT
TTATGTTGAAATTGAGCGTGCGCGACTGACTAAAACATTAGCAACTATAAAAGAACAAAATGGTGATGTGAAAGA
GGCAGCCTCCATTTTACAGGAGTTACAGGTGGAAACCTACGGGTCAATGGAAAAGAAAGAGCGAGTGGAATTTAT
TTTGGAGCAAATGAGGCTCTGCCTAGCTGTGAAGGATTACATTCGAACACAAATCATCAGCAAGAAAATTAACAC
CAAATTTTTCCAGGAAGAAAATACAGAGAAATTAAAGTTGAAGTACTATAATTTAATGATTCAGCTGGATCAACA
TGAGGGATCCTATTTGTCTATTTGTAAGCACTACAGAGCAATATATGATACTCCCTGTATACAGGCAGAAAGTGA
AAAATGGCAGCAGGCTCTGAAGAGTGTTGTACTCTATGTTATCCTGGCTCCTTTTGACAATGAACAGTCAGATTT
GGTTCACCGAATAAGTGGTGACAAGAAGTTAGAAGAAATTCCCAAATACAAGGATCTTTTAAAGCTTTTTACCAC
AATGGAGTTGATGCGTTGGTCCACACTTGTTGAGGACTATGGAATGGAATTAAGAAAAGGTTCCCTTGAGAGTCC
TGCAACGGATGTTTTTGGTTCTACAGAGGAAGGTGAAAAAAGGTGGAAAGACTTGAAGAACAGAGTTGTTGAACA
TAATATTAGAATAATGGCCAAGTATTATACTCGGATAACAATGAAAAGGATGGCACAGCTTCTGGATCTATCTGT
TGATGAGTCCGAAGCCTTTCTCTCAAATCTAGTAGTTAACAAGACCATCTTTGCTAAAGTAGACAGATTAGCAGG
AATTATCAACTTCCAGAGACCCAAGGATCCAAATAATTTATTAAATGACTGGTCTCAGAAACTGAACTCATTAAT
GTCTCTGGTTAACAAAACTACGCATCTCATAGCCAAGAGGAGATGATACATAATCTACAA**TAA**GGGTCTTAGTG
CTTTAGAAAAAAGTTAAAATTGGAAGTCATTAAAAAAAGACTGTTATAATGGTGTATATGTTGGGGTTTTTTTTC
TAAGCTTCTTTGTCTTAAATTTTAAAATAGTGAATATGTTTGAGACTCCCTTTGACCTTTCAGTTCCCCAAGTTC
ATTGTTAACTTTGCATTTGCAATTGGTGCAAAAATACAGATTTCTGTCGTCTGAATACACAAAAAGTTGTGTCAT
AACTTACCCAGATATGTTTTTCTATCATTTGAAACCTTTTTAGCTACTGTTTGTTTTCATTCAACTAACAAACAT
ATTCCAATAATAAAAGCAGTATATACATATTTCCTTTCTACAGTTACCTCTGATTCTCAACATTTTGTGGGGTAG
TGATTGGCAAGTGTTTTTTAAATAAAACAAATCTCATTGTAAAGTTATCAGTCATTTAGTAGAATAGAAAAGCA
ACATAGAGCATACAAGAACATTTGGGATAGAGTTGTGATTTGTGAAGAATTTGTACTTTGATATTGTGGCGGAAA
GTCTAGACTGAGTGTGTATGCTGGTAAACTGTAGACTTTTTTTTTTTTTTGAGTCCGGCTGGTTCCAATCACA
GTAGCTTGATTGCTTTCAGCCCTCATCCTCTCACTTGATCAGTTGTTCAACAGAATCAGCTGACATAATTGACAC
AGTTTATTGGGTGTTAAGTCCGCTCTATAGGGATAGTGACTACTTTTTTTTTTTTTTTTTTTTGCTCTTCTTC
CTCTCCCCTTTCTTTATATGGGTTTAAATTTAACATAAAGTTGTTTTTATAAGGCTTATTGTGGCTTTAACTTG
TAAGTCTGATTACATCATTATTGTTCCAAATTCATTATCTCTGTAGGAACTTTTAGTTCCATTATATGAACACTG
GATAACCTAATTTTTTTTAATGCTTTAAAAAAATGGCAAAAGACGTCAGGCCACCCTCATAGTAAGTGGTGTAG
TATTAAAATATTTTCACGGAATTAAAAGTAGCTTGCTGTCAAAGAAACACCTGAGATGAATTGGTGTGAACGAAT
TTTGCAAGTTTAATTTGATTTATTTCAGAGAAAATAGAAAAAACAATGTTAGAAGGTTATTTAAAATGATACTTA
AATAAAGAAAGTGTGAGGTCTACTTTAAAAAAATTCAAATGAAGAGAAAAGAAAAACAGCATTCTAGAAATGGC
ATTTCTCCTAATTAATTTTCCACTTAATGGAAGATTATCAATTGTCCTATTTTATGATCCCAGGACTGAAGACAG
TTGTGGGATATCTGTCATATTTATCCTGTGAGTCATTGTGAATAATGACATACAGTACTGAAGTAATCTGATTTT
ATTCTTTGGAAATTCAATGCATTGGTCACACTAATAACATCAACATCTGCTATCACTTATCTTTTTAAAACTAAC
CAAAAAAGGCTGGGATTACAGGCATGAGCCACTGCACCCAACTCCTCTTTCGTCTTTCTTTAACACACACTAGGC
TCTTTGTGTATTATGATTCAGTGCTATTTGTAACTGTGTCCCAGTGACCAAATTGCACTCGACTCGATCAGCTGT
TCATCCATTTCGTGTTTTTTCCTGTCAAACATTAATCCAGCAAATATATGAGGTATTTACCAATTTATTTTCTTA
GTATTACAAAATAATTCATTAGCATAAAGTACAATAGTGAAATATTTGAGTTGTTCGGAACCTCAATTAATCCTG
TTTTACATTTCAGACCTAAAGCTGGCAATCAGGAGAAGAAGCACTTTGTTTTAAATGTGGAGAAGATAACACTTG
ATTCCATTTCATTGTCATTAGTGTATTAACCAGCAGGAGAGGTGATGAGCCATTTTTCAAATGAAATACCTTTTA
TTTCCATATAATTTTTTTATTTTAGAGTTCAATAGCTGTTTCTATGATTATCCTCAATTTCCATATGTTACTGAA
TCTGAAAACATCTTTAAAATTCAAACAGTTCCATTTTCTCTCTTGTAAGTGTTAAATGTGATAAAGTACATAT
TTTAAATTGTTTTCAGCTCTTGGATATAGCAGCAATAAAAACACTAATTTGTGGGTATTTAAGAAAACCTGGAGA
ATAAACTCATACTTTAAAAGATC

FIGURE 491

MADGGSERADGRIVKMEVDYSATVDQRLPECAKLAKEGRLQEVIETLLSLEKQTRTASDMVSTSRILVAVVKMCY
EAKEWDLLNENIMLLSKRRSQLKQAVAKMVQQCCTYVEEITDLPIKLRLIDTLRMVTEGKIYVEIERARLTKTLA
TIKEQNGDVKEAASILQELQVETYGSMEKKERVEFILEQMRLCLAVKDYIRTQIISKKINTKFFQEENTEKLKLK
YYNLMIQLDQHEGSYLSICKHYRAIYDTPCIQAESEKWQQALKSVVLYVILAPFDNEQSDLVHRISGDKKLEEIP
KYKDLLKLFTTMELMRWSTLVEDYGMELRKGSLESPATDVFGSTEEGEKRWKDLKNRVVEHNIRIMAKYYTRITM
KRMAQLLDLSVDESEAFLSNLVVNKTIFAKVDRLAGIINFQRPKDPNNLLNDWSQKLNSLMSLVNKTTHLIAKEE
MIHNLQ

FIGURE 492

TTGGTCTAAGACATGGGCTGACAAACTTTTTCCATAAAGGGCCAGAAAGTAAATATTTCAGGCTTTGTGGGATAT
CTATTTATGATTTATTTTACTCCTAGTATTATTTCATCTTTTATACAGGTTATTAAGGTTAGTATTGCTGCATAA
CAAATTACTCCAAAATTTAATCATTTATATTCAAGAAGAGTTCAGCTGCTAGGTTCTTATTTTGGGACTCTCATG
ATGCTGAGGTCAAG**ATG**CCAGCTGGAGGCCAGGCGCCGCAGCTCACGCCTGTAATCCCAGCGTTTTGGGAGGCCA
GGGGCCTCCCAAATTCAAAAGGAAGAGACAAAGTCCACATCTGTCAATGCGAAGAATGGAAAGGTCACATATCAT
ATGTGGAGCGGGACATAACAACTTCGGAAATTAAATCTCTTCCCCAGGTCAGTGTGCGGGCCTTCCACGCTGCCA
GCGGAACACTGGAATGGCGGAAGGGGAACGGGTACGGCAGGGGGAAAGGCTGGGGGTGGGGTCGGGTCGAGTCGA
GGGAAGCTGGCCCGAGTGTGGACAGAGATGGCGGTCTGCGCGTCTGTTGTTCCCAGCGCTCTGCGAAGCCTGAAA
AGGAGGAGCAACCTGTCCAGAATCCCCGCAGGTCCGTGAAAGACAGGAAAAGGAGGGGAAATCTCGACATGGAAA
AACTCTACAGTGAAAATGAAGGAATGGCTTCAAACCAAGGAAAGATGGAAAATGAAGAACAGCCACAAGACGAGA
GAAAGCCAGAAGTAACTTGTACTCTGGAAGACAAGAAGTTAGAAAACGAGGGAAAGACAGAAAACAAGGGCAAAA
CAGGAGATGAGGAAATGTTAAAGGATAAAGGAAAGCCAGAGAGTGAGGGAGAGGCAAAAGAAGGAAAGTCAGAGA
GGGAGGGAGAGTCAGAGATGGAGGGAGGATCAGAGAGAGAGGGAAAACCAGAGATAGAGGGAAAGCCAGAGAGTG
AAGGAGAGCCAGGGAGTGAAACAAGGGCTGCAGGAAAGCGCCCAGCTGAGGATGATGTACCCAGGAAAGCCAAAA
GAAAAACTAATAAGGGGCTGGCTCATTACCTCAAGGAGTATAAAGAGGCCATACATGATATGAATTTCAGCAATG
AGGACATGATAAGAGAATTTGACAATATGGCTAAGGTGCAGGATGAGAAGAGAAAAAGCAAACAGAAATTGGGGG
CGTTTTTGTGGATGCAAAGAAATTTACAGGACCCCTTCTACCCTAGAGGTCCAAGGGAATTCAGGGGTGGCTGCA
GGGCCCCACGAAGGGACATTGAAGACATTCCTTATGTG**TAG**TGTCCCTGGCAGGCATTTACCAGGCCATGTGCTT
TAACGTTACGGTAATACTTTACTTTAGGCATCCCTCCTGTTGCTAGCAGCCTTTTGACCTATCTGCAATGCAGTG
TTCTCAGTAGGAAATGTTCATCTGTTACATGGAAAAAATGTTGATGGTGCATTGTAAAATTAAAAAACACAACTT
GCAGAACCAAAAAAAA

FIGURE 493

MPAGGQAPQLTPVIPAFWEARGLPNSKGRDKVHICQCEEWKGHISYVERDITTSEIKSLPQVSVRAFHAASGTLE
WRKGNGYGRGKGWGWGRVESREAGPSVDRDGGLRVCCSQRSAKPEKEEQPVQNPRRSVKDRKRRGNLDMEKLYSE
NEGMASNQGKMENEEQPQDERKPEVTCTLEDKKLENEGKTENKGKTGDEEMLKDKGKPESEGEAKEGKSEREGES
EMEGGSEREGKPEIEGKPESEGEPGSETRAAGKRPAEDDVPRKAKRKTNKGLAHYLKEYKEAIHDMNFSNEDMIR
EFDNMAKVQDEKRKSKQKLGAFLWMQRNLQDPFYPRGPREFRGGCRAPRRDIEDIPYV

FIGURE 494

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ATAAATATTGGAAATGACAACTTTAACAATTCTATATGTACACAGGACACTGAAAACATAAAATCATGAACAAGG
CCAAAAAATAACGTTGCACATTAACCCTTTAGTTATTACTTTCTATTTTCCAGTCCCAGCATCATACCTGCTAAT
TACTCAGATCACAAGCCTCAAGGATTAAGTGTTTTGAATGTATTTCAGTTTCATACTTTAACAATGCTTAAAGAC
TATTGGTTGTATTCTGATCAAATGGTTCTCCTTCCCATATTTCCCTTTCTCAATAGATCTTANACAAAAAGGTGA
GCAGGGAAAACTGTGATTACAGGATCCAACATGACAGGTATACCCAATGATTCATTTAAGGGTGGCATAAAGTTA
TATAGAAAAGACCTACAGGACGGAAGACAAGTACATCAACATGTAGTGAAATTAAGCAGTTCACCCACTGCGTGC
TTACATGGCTCCTATATCTCTTCGGGAAGAAGCCAGAGCCGTAGAAGAAGTCAGGGCAAACCAGAACTGTTGAGG
AGTATGGGTGGGGGGGCAGAAGGAAGGGACTGGGGGAAAA
```

FIGURE 495A

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GTACTCTCGCGGTATTTGTCCCGACTCTCGCGGGGTTTAGCGTGGCATTGGGAGGCCCGGCCTGGGGGAGGAGAC
GGCGTTCCGTTAGCGGCGTTGGGGTTTGGCTGCAGTGGCAGTGCTTTCTCTTCTGCTCACGGGGACCCGCTCAGG
CTGGAGGCCAGCCAGCTCTTGCCGCCACCTCGGTCGCGATGGGGGCGCAGGACCGGCCGCAGTGCCACTTCGACA
TCGAGATCAACCGGGAGCCGGTTGGTCGCATTATGTTTCAGCTCTTCTCAGACATATGTCCAAAAACATGCAAAA
ACTTCCTTTGCTTGTGCTCAGGAGAGAAAGGCCTTGGGAAAACAACTGGGAAGAAGTTATGTTATAAAGGTTCTA
CGTTCCATCGTGTGGTTAAAAACTTTATGATTCAGGGTGGGGACTTCAGTGAAGGTAATGGAAAAGGTGGAGAAT
CAATTTATGGTGGATATTTTAAAGATGAAAACTTTATTCTCAAACATGACAGAGCGTTCCTTTTATCAATGGCAA
ATCGAGGGAAACATACCAATGGTTCCCAGTTTTTCATTACCACAAAGCCTGCTCCACACCTGGATGGGGTGCATG
TAGTCTTTGGACTGGTTATTTCTGGTTTTGAAGTAATCGAACAAATTGAAAATCTGAAGACCGATGCTGCAAGCA
GACCATATGCAGATGTGCGAGTTATTGACTGTGGAGTACTTGCCACAAAATCAATAAAAGATGTTTTTGAGAAAA
AAAGGAAGAAACCAACTCATTCAGAAGGCTCGGATTCCTCTTCCAATTCCTCCTCTTCTTCAGAATCATCTTCAG
AAAGTGAACTTGAACATGAGAGAAGCAGAAGGAGGAAACATAAGAGGAGGCCAAAAGTTAAACGTTCTAAAAAGA
GGCGAAAGGAAGCAAGCAGTTCAGAAGAGCCAAGGAATAAACATGCAATGAACCCAAAAGGTCACTCTGAGAGGA
GTGATACCAATGAAAAAGGTCAGTTGATTCCAGTGCTAAAAGGGAAAAACCTGTGGTCCGCCCAGAAGAGATTC
CTCCAGTGCCTGAGAACCGATTTTTACTGAGAAGAGATATGCCTGTTGTTACTGCAGAACCTGAACCGAAGATTC
CTGATGTTGCACCCATTGTAAGTGATCAGAAACCATCTGTATCAAAGTCTGGACGGAAGATTAAAGGAAGGGGCA
CAATTCGCTATCACACACCTCCAAGATCAAGATCCTGTTCTGAGTCAGATGATGATGACAGCAGTGAAACTCCTC
CTCACTGGAAAGAGGAAATGCAGAGATTAAGAGCATATAGACCACCTAGTGGAGAAAAATGGAGTAAAGGAGATA
AGTTAAGTGACCCCTGTTCAAGCCGATGGGATGAAAGAAGCTTGTCTCAGAGATCCAGATCATGGTCCTATAATG
GATATTATTCAGACCTTAGTACAGCAAGACACTCTGGCCACCATAAAAAACGCAGAAAAGAAAAAAGGTTAAGC
ATAAAAAGAAAGGGAAAAAGCAGAAACACTGCAGAAGACACAAACAAACAAAGAAGAGAAGGATTCTTATACCGT
CTGACATAGAATCCTCAAAATCTTCCACTCGAAGAATGAAATCCTCTTGTGATAGAGAAAGGAGTTCTCGTTCTT
CCTCATTGTCATCTCATCACTCATCAAAGAGAGACTGGTCTAAATCTGATAAGGATGTCCAGAGCTCTTTAACCC
ATTCCAGCAGAGACTCATACAGATCAAAATCTCACTCACAGTCTTATTCTAGAGGAAGCTCAAGATCAAGGACTG
CGTCAAAGTCCTCATCACATTCTCGAAGTAGATCAAAGTCCAGATCTAGTTCCAAGTCTGGGCACCGAAAGAGAG
CATCAAAATCACCAAGAAAAACAGCTTCTCAGTTAAGTGAAAATAAACCAGTTAAAACAGAACCTTTAAGAGCAA
CCATGGCACAAAATGAAAATGTAGTAGTACAACCAGTTGTAGCAGAAAATATTCCTGTAATACCACTGAGTGACA
GTCCCCCCCCTTCAAGATGGAAGCCTGGACAGAAACCTTGGAAGCCCTCTTATGAGCGAATTCAGGAAATGAAAG
CTAAAACAACCCATTTGCTACCCATCCAAAGCACTTACAGTTTAGCAAATATTAAAGAGACTGGTAGCTCATCAT
CCTACCATAAAAGAGAAAAAAATTCGGAAAGTGATCAGAGCACTTATTCAAAATACAGTGATAGAAGTTCAGAAA
GCTCACCAAGGTCAAGGAGCAGATCTTCTAGGAGTAGATCTTATTCCAGATCATATACAAGATCACGTAGTCTAG
CTAGTTCACATTCAAGGTCTAGGTCTCCATCATCTAGATCTCATTCACGAAATAAATACAGTGATCATTCACAGT
GTAGTAGATCATCTTCATATACTTCTATTAGCAGTGATGATGGAAGGCGAGCTAAGAGGAGACTTAGATCCAGTG
GGAAAAAAAATAGCGTTTCACATAAAAAGCATAGCAGCAGCTCTGAAAAGACACTTCACAGTAAATATGTCAAAG
GTAGAGACAGGTCTTCATGTGTGAGAAAGTATAGCGAGAGCAGATCATCTTTAGATTATTCTTCAGACAGTGAGC
AGTCAAGTGTTCAGGCCACACAGTCAGCCCAGGAAAAAGAGAAGCAGGGCCAAATGGAAAGAACACATAATAAAC
AAGAAAAAAACAGAGGTGAAGAAAAATCCAAGTCTGAACGGGAATGCCCTCATTCAAAAAAAAGAACTTTGAAAG
AGAATCTTTCTGATCACCTTAGAAATGGCAGTAAGCCCAAAAGGAAGAATTATGCTGGTAGTAAATGGGACTCTG
AGTCAAATTCAGAACGAGATGTCACTAAAAACAGTAAAAATGACTCCCATCCATCCTCTGACAAGGAAGAAGGTG
AGGCCACATCCGATTCTGAATCAGAGGTTAGTGAAATTCACATCAAAGTCAAACCCACAACCAAGTCGTCCACAA
ATACTTCACTGCCTGATGATAATGGTGCTTGGAAATCAAGCAAACAGCGCACATCAACTTCTGACTCTGAGGGGT
CCTGTTCCAATTCGGAAAACAATAGGGGAAAGCCACAAAAGCACAAACATGGGTCAAAGGAAAATCTTAAAAGAG
AACACACCAAAAAAGTGAAAGAGAAATTGAAAGGGAAAAAGACAAAAAGCATAAGGCTCCAAAACGAAAGCAAG
CATTTCACTGGCAGCCTCCACTAGAATTTGGTGAAGAGGAGGAGGAGGAGATTGATGACAAGCAAGTTACTCAGG
AATCAAAAGAGAAAAAGTTTCTGAAAACAATGAAACCATAAAAGATAATATTCTAAAAACTGAGAAATCCAGTG
AAGAGGACCTTTCAGGTAAACATGATACAGTGACTGTTTCATCAGATCTTGATCAGTTTACTAAAGATGATAGTA
AACTCAGTATTTCTCCCACAGCTTTAAATACTGAGGAAAATGTGGCCTGTTTACAAAACATTCAGCACGTTGAAG
AAAGTGTTCCCAATGGAGTGGAAGATGTGCTTCAAACAGATGACAACATGGAGATCTGCACTCCTGATAGGAGTT
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FIGURE 495B

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CCCCAGCAAAAGTAGAGGAGACTTCCCCTCTAGGAAATGCACGGCTTGATACCCCAGATATAAACATTGTTTTGA
AGCAGGATATGGCAACGGAACATCCTCAAGCAGAGGTAGTAAAACAGGAAAGCAGCATGTCCGAAAGTAAAGTGT
TGGGTGAAGTGGGGAAACAGGACAGCAGCTCTGCTAGCTTGGCTAGTGCTGGAGAAAGTACCGGGAAGAAGGAGG
TGGCTGAGAAGAGCCAGATCAACCTCATTGATAAGAAATGGAAGCCCCTGCAAGGTGTGGGGAACCTGGCAGCAC
CTAATGCTGCCACATCCAGTGCTGTGGAAGTTAAGGTGTTGACCACTGTGCCTGAAATGAAACCACAAGGCTTGA
GAATAGAAATTAAAAGCAAAAATAAAGTTCGGCCTGGGTCTCTCTTTGATGAAGTAAGAAAGACAGCACGCTTAA
ACCGTAGACCAAGAAATCAGGAGAGTTCAAGTGATGAGCAGACGCCTAGTCGGGATGATGATAGCCAGTCCAGGA
GTCCAAGTAGATCTCGAAGTAAATCTGAAACCAAATCAAGACACAGAACAAGGTCTGTCTCCTATAGTCACTCAA
GAAGTCGATCGAGAAGTTCCACATCATCTTATCGATCAAGAAGCTACTCTAGAAGTCGGAGCAGAGGATGGTACA
GCAGAGGCCGAACCAGAAGCCGGAGCAGTTCCTACCGGAGTTACAAAAGTCACAGGACGTCCAGCAGGAGCAGAT
CCAGGAGCAGCTCATATGATCCCCACAGTCGATCCAGGTCCTACACCTACGATAGCTACTATAGCAGGAGTCGGA
GTCGAAGTAGAAGCCAGAGAAGTGACAGTTACCACCGAGGCAGAAGTTATAATCGGCGGTCCAGGAGTTGTAGAT
CTTATGGCTCTGACAGTGAAAGTGACCGAAGTTACTCTCATCACCGGAGCCCCAGTGAGAGCAGCAGATACAGTT
GAAAACGTCCGGATACAAATTATATCTTATTTGTAAATATCTGGCAACTTAGCTTAAGAAATGTAATGACAGTCT
GTTGTTCTATTTCAATATCAGAGGTGAATTTCAAAAATAGACACTTCTTAATTGTTACTGGTTCATTTACATGTG
GGGAGAAGAATTTAAAATACAGATATGTCTCCTAAAAATATTTTTATGCCACATTTTACAGTAGCCAACTATGGA
AATGAATTTCATTTTCTTGAATCAAGAAATCGTGAAATTTATCTATGTATAATTTGCAATATTATTTTAAGTCTA
TTTCACTCTATCTTACGTATCCCTTAGAATACAGATTCTTTTTGCCTGTTTTTCCAGTTTTAGCATATATGCTGC
CAAGCATAGAACTGTGAAGGAGAACTGTTAAAGGCGGCCAAATATTTATATACTGATTACATAGAGTCTTGTACA
TATGTGCTCTAAAAACAAACCACCCAGAATTGATACTGTTGGTAACCAGGAGTATAAGGCAGTGGCTCTGGGGTT
CTTAATTCATTCCTAACTTCTTTGATACTTCACAGGATTAGGAAAGTGGTCATCATACATCCCACACAGTCTGTA
TTACTTCAGGCTTGTGGGCAAGGTTAGGAAGAATCAATCAGCCTTAACTATAAATACCTGCACTGTCTCTGAGGA
CTTACTATTTTATGTTCTTTTTAATCAATACCGATCAGAAGTTTAGGTTATAAAAACAATTCTACTTCATGCTTT
GGTGCTTGGTAATTTTTGGTGCGTCTTTAAGCATTACTCTTATATATCATATATTAAAATACCATAAAAATGAAA
TTCAGACAAATCACTGGCACCAAAAATGGTTTATTCTGAGCTGTCTTCACTTTGACTATTTGGGGGGCTTCTCT
CAAGTACAGATGTGGGTTGGGGTCCCCTGGAGCAGGCAGGATTGGCAGTAAGAGATATTGGCCACTCAAGTCTAC
TGTGTGTGTGTGCCTCTGGAAGAGTGAAGAATGGACTTCAAAAGTAACATCAAAAATCTAACTGCCACCATCCTG
GAGACATTTTGCAGGGCTTTCCTTTCAAGTCTTTCAAGTACAGGATATTACCACAACAGCAGCTGAACTGTTGTA
ACCAGCATGTTTTTCCTATTTCCACTGTGACCTGCAGCTGACTCAAAGCCTTGCGTGACCTGACCCAGGTGCAAG
AGACAGGGGAAGAGGGATAGAGGGTATAGCATAAATTACATATTTTCATGGCTTTGGGTGGTTCCTCCAAAAATA
ATTGGACCTGTAAAAACTAGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGTGGTTTTTTTTTTTAATCTTTAC
TTTGAATTTGTTCCCCAAGTGTACTTAATCACCTTAGTGCCAGTTTAATCCAGTTATGCAGAAGAAATTCATATT
GGTTGCCTGATGTAGAGCTCAGCACCACCCTACCACAGGCCTTGTCTGGTGTATTTGGGAAGTGGAAAAGAGCCC
TCAGTTGGAGGGAGCTGACAACCCTTGGTGGAGGGAGGGTGCCCTTGAATGTATTAAAACTATCACCCAAAGAAG
GTATGAAAACAGGGTAAGGTGGTCAGTTGTTTGCCAGGTCAATAGACAGAAAGTACATTAGAAAACAGGACTTAG
GCCAAACAAACAATACTGGATACTGAATACAAAACAGTATGATTTATATTAAAGGTTTCCAAAGGTTGCCTGCAA
AGGAGAATATTACTACTAGTCAGCAGGAAAAAAATGCATTCAGAACCCAAGCAGAAACTGCCAAATGTAATTAGG
TTAAGAAAAGTTACCCTTGGGCAGTGTATTAGTTTTCTATTGCTGTGTGACAAATTACCCCAAATTTAGCAGTTT
AAAAAACAATACCCATAGCAGTTCTGTAGCTCATGAGTCTGGCACAGTGTGGCTGGATTCTCTGCTCAGGGTCTT
AAAGGCTGAAATAAGGGTTGGCAGGACAACATTCCTTCATGGAGGCTCTGGGGAAGAATCTGCTTCTAAGTTCAT
TCAGGTTGTTGGCGGAATTCAGTTCTTTGCTGGCTCTCAGCTGGAGGCCCCTCTCTCACCTCAAGGCTGCCTGCA
TTCCTTCTTATGTGGTCCCCTCCAGCTTCAAACCAGCCTTCCTGCTCTTTCTCATGCTTCATATCTCTCTCCCGT
CCTCCTGTTTTAGGGGCATATGATTAGCTCAAGCCCACAGATATATTTTAAGGTTGATTGTGCGATAGAACATAA
TTGCAGGAGTACTGTCTCATCTCATCATATTCACGGGTTCTGGAGATTAGCTCATTGAAAGTGGGAGGGGCATTT
TCAAATTCTGCCTACCACAGGCAATAACTGCCCATCTCAGCTGTAGGTGGAATTTTTACCCAGAAAAGATAGGCC
CTAGAAGCCTCATTTCTTTTCTCCATGGAAAAGGACAGCCCTCTGCTGCAGCGTTCAACTTGTGTGTTTACTGAC
AGAGTGAACTACAGAAATAGCTTTTCTTCCTAAAGGGGATTGTTCTACATTTTGAAGTTATTTTTAATAAAATT
GAATTATGTTGT
```

FIGURE 496

MGAQDRPQCHFDIEINREPVGRIMFQLFSDICPKTCKNFLCLCSGEKGLGKTTGKKLCYKGSTFHRVVKNFMIQG
GDFSEGNGKGGESIYGGYFKDENFILKHDRAFLLSMANRGKHTNGSQFFITTKPAPHLDGVHVVFGLVISGFEVI
EQIENLKTDAASRPYADVRVIDCGVLATKSIKDVFEKKRKKPTHSEGSDSSSNSSSSSESSSESELEHERSRRRK
HKRRPKVKRSKKRRKEASSSEEPRNKHAMNPKGHSERSDTNEKRSVDSSAKREKPVVRPEEIPPVPENRFLLRRD
MPVVTAEPEPKIPDVAPIVSDQKPSVSKSGRKIKGRGTIRYHTPPRSRSCSESDDDDSSETPPHWKEEMQRLRAY
RPPSGEKWSKGDKLSDPCSSRWDERSLSQRSRSWSYNGYYSDLSTARHSGHHKKRRKEKKVKHKKKGKKQKHCRR
HKQTKKRRILIPSDIESSKSSTRRMKSSCDRERSSRSSSLSSHHSSKRDWSKSDKDVQSSLTHSSRDSYRSKSHS
QSYSRGSSRSRTASKSSSHSRSRSKSRSSSKSGHRKRASKSPRKTASQLSENKPVKTEPLRATMAQNENVVVQPV
VAENIPVIPLSDSPPPSRWKPGQKPWKPSYERIQEMKAKTTHLLPIQSTYSLANIKETGSSSSYHKREKNSESDQ
STYSKYSDRSSESSPRSRSRSSRSRSYSRSYTRSRSLASSHSRSRSPSSRSHSRNKYSDHSQCSRSSSYTSISSD
DGRRAKRRLRSSGKKNSVSHKKHSSSSEKTLHSKYVKGRDRSSCVRKYSESRSSLDYSSDSEQSSVQATQSAQEK
EKQGQMERTHNKQEKNRGEEKSKSERECPHSKKRTLKENLSDHLRNGSKPKRKNYAGSKWDSESNSERDVTKNSK
NDSHPSSDKEEGEATSDSESEVSEIHIKVKPTTKSSTNTSLPDDNGAWKSSKQRTSTSDSEGSCSNSENNRGKPQ
KHKHGSKENLKREHTKKVKEKLKGKKDKKHKAPKRKQAFHWQPPLEFGEEEEEEIDDKQVTQESKEKKVSENNET
IKDNILKTEKSSEEDLSGKHDTVTVSSDLDQFTKDDSKLSISPTALNTEENVACLQNIQHVEESVPNGVEDVLQT
DDNMEICTPDRSSPAKVEETSPLGNARLDTPDINIVLKQDMATEHPQAEVVKQESSMSESKVLGEVGKQDSSSAS
LASAGESTGKKEVAEKSQINLIDKKWKPLQGVGNLAAPNAATSSAVEVKVLTTVPEMKPQGLRIEIKSKNKVRPG
SLFDEVRKTARLNRRPRNQESSSDEQTPSRDDDSQSRSPSRSRSKSETKSRHRTRSVSYSHSRSRSRSSTSSYRS
RSYSRSRSRGWYSRGRTRSRSSSYRSYKSHRTSSRSRSRSSSYDPHSRSRSYTYDSYYSRSRSRSRSQRSDSYHR
GRSYNRRSRSCRSYGSDSESDRSYSHHRSPSESSRYS

FIGURE 497A

CGGCAGGGTTGGAAAATGATGGAAGAGGCGGAGGTGGAGGCGACCGAGTGCTGAGAGGAACCTGCGGAATCGGCC
GAG**ATG**GGGTCTGGCGCGCGCTTTCCCTCGGGGACCCTTCGTGTCCGGTGGTTGCTGTTGCTTGGCCTGGTGGGC
CCAGTCCTCGGTGCGGCGCGGCCAGGCTTTCAACAGACCTCACATCTTTCTTCTTATGAAATTATAACTCCTTGG
AGATTAACTAGAGAAAGAAGAGAAGCCCCTAGGCCCTATTCAAAACAAGTATCTTATGTTATTCAGGCTGAAGGA
AAAGAGCATATTATTCACTTGGAAAGGAACAAAGACCTTTTGCCTGAAGATTTTGTGGTTTATACTTACAACAAG
GAAGGGACTTTAATCACTGACCATCCCAATATACAGAATCATTGTCATTATCGGGGCTATGTGGAGGGAGTTCAT
AATTCATCCATTGCTCTTAGCGACTGTTTTGGACTCAGAGGATTGCTGCATTTAGAGAATGCGAGTTATGGGATT
GAACCCCTGCAGAACAGCTCTCATTTTGAGCACATCATTTATCGAATGGATGATGTCTACAAAGAGCCTCTGAAA
TGTGGAGTTTCCAACAAGGATATAGAGAAAGAAACTGCAAAGGATGAAGAGGAAGAGCCTCCCAGCATGACTCAG
CTACTTCGAAGAAGAGAGCTGTCTTGCCACAGACCCGGTATGTGGAGCTGTTCATTGTCGTAGACAAGGAAAGG
TATGACATGATGGGAAGAAATCAGACTGCTGTGAGAGAAGAGATGATTCTCCTGGCAAACTACTTGGATAGTATG
TATATTATGTTAAATATTCGAATTGTGCTAGTTGGACTGGAGATTTGGACCAATGGAAACCTGATCAACATAGTT
GGGGGTGCTGGTGATGTGCTGGGGAACTTCGTGCAGTGGCGGGAAAAGTTTCTTATCACACGTCGGAGACATGAC
AGTGCACAGCTAGTTCTAAAGAAAGGTTTTGGTGGAACTGCAGGAATGGCATTTGTGGGAACAGTGTGTTCAAGG
AGCCACGCAGGCGGGATTAATGTGTTTGGACAAATCACTGTGGAGACATTTGCTTCCATTGTTGCTCATGAATTG
GGTCATAATCTTGGAATGAATCACGATGATGGGAGAGATTGTTCCTGTGGAGCAAAGAGCTGCATCATGAATTCA
GGAGCATCGGGTTCCAGAAACTTTAGCAGTTGCAGTGCAGAGGACTTTGAGAAGTTAACTTTAAATAAAGGAGGA
AACTGCCTTCTTAATATTCCAAAGCCTGATGAAGCCTATAGTGCTCCCTCCTGTGGTAATAAGTTGGTGGACGCT
GGGGAAGAGTGTGACTGTGGTACTCCAAAGGAATGTGAATTGGACCCTTGCTGCGAAGGAAGTACCTGTAAGCTT
AAATCATTTGCTGAGTGTGCATATGGTGACTGTTGTAAAGACTGTCGGTTCCTTCCAGGAGGTACTTTATGCCGA
GGAAAAACCAGTGAGTGTGATGTTCCAGAGTACTGCAATGGTTCTTCTCAGTTCTGTCAGCCAGATGTTTTTATT
CAGAATGGATATCCTTGCCAGAATAACAAAGCCTATTGCTACAACGGCATGTGCCAGTATTATGATGCTCAATGT
CAAGTCATCTTTGGCTCAAAAGCCAAGGCTGCCCCCAAAGATTGTTTCATTGAAGTGAATTCTAAAGGTGACAGA
TTTGGCAATTGTGGTTTCTCTGGCAATGAATACAAGAAGTGTGCCACTGGGAATGCTTTGTGTGGAAAGCTTCAG
TGTGAGAATGTACAAGAGATACCTGTATTTGGAATTGTGCCTGCTATTATTCAAACGCCTAGTCGAGGCACCAAA
TGTTGGGGTGTGGATTTCCAGCTAGGATCAGATGTTCCAGATCCTGGGATGGTTAACGAAGGCACAAAATGTGGT
GCTGGAAAGATCTGTAGAAACTTCCAGTGTGTAGATGCTTCTGTTCTGAATTATGACTGTGATGTTCAGAAAAAG
TGTCATGGACATGGGGTATGTAATAGCAATAAGAATTGTCACTGTGAAAATGGCTGGGCTCCCCCAAATTGTGAG
ACTAAAGGATACGGAGGAAGTGTGGACAGTGGACCTACATACAATGAAATGAATACTGCATTGAGGGACGGACTT
CTGGTCTTCTTCTTCCTAATTGTTCCCCTTATTGTCTGTGCTATTTTATCTTCATCAAGAGGGATCAACTGTGG
AGAAGCTACTTCAGAAAGAAGAGATCACAAACATATGAGTCAGATGGCAAAAATCAAGCAAACCCTTCTAGACAG
CCGGGGAGTGTTCCTCGACATGTTTCTCCAGTGACACCTCCCAGAGAAGTTCCTATATATGCAAACAGATTTGCA
GTACCAACCTATGCAGCCAAGCAACCTCAGCAGTTCCCATCAAGGCCACCTCCACCACAACCGAAAGTATCATCT
CAGGGAAACTTAATTCCTGCCCGTCCTGCTCCTGCACCTCCTTTATATAGTTCCCTCACT**TGA**TTTTTTAACCT
TCTTTTTGCAAATGTCTTCAGGGAACTGAGCTAATACTTTTTTTTTTTCTTGATGTTTTCTTGAAAAGCCTTTCT
GTTGCAACTATGAATGAAAACAAAACACCACAAAACAGACTTCACTAACACAGAAAAACAGAAACTGAGTGTGAG
AGTTGTGAAATACAAGGAAATGCAGTAAAGCCAGGGAATTTACAATAACATTTCCGTTTCCATCATTGAATAAGT
CTTATTCAGTCATCGGTGAGGTTAATGCACTAATCATGGATTTTTTGAACATGTTATTGCAGTGATTCTCAAATT
AACTGTATTGGTGTAAGATTTTTGTCATTAAGTGTTTAAGTGTTATTCTGAATTTTCTACCTTAGTTATCATTAA
TGTAGTTCCTCATTGAACATGTGATAATCTAATACCTGTGAAAACTGACTAATCAGCTGCCAATAATATCTAATA
TTTTTCATCATGCACGAATTAATAATCATCTATACTCTAGAATCTTGTCTGTCACTCACTACATGAATAAGCAAAT
ATTGTCTTCAAAAGAATGCACAAGAACCACAATTAAGATGTCATATTATTTTGAAAGTACAAAATATACTAAAAG
AGTGTGTGTGTATTCACGCAGTTACTCGCTTCCATTTTTATGACCTTTCAACTATAGGTAATAACTCTTAGAGAA
ATTAATTTAATATTAGAATTTCTATTATGAATCATGTGAAAGCATGACATTCGTTCACAATAGCACTATTTTAAA
TAAATTATAAGCTTTAAGGTACGAAGTATTTAATAGATCTAATCAAATATGTTGATTCATGGCTATAATAAAGCA
GGAGCAATTATAAAATCTTCAATCAATTGAACTTTTACAAAACCACTTGAGAATTTCATGAGCACTTTAAAAATCT
GAACTTTCAAAGCTTGCTATTAAATCATTTAGAATGTTTACATTTACTAAGGTGTGCTGGGTCATGTAAAATATT
AGACACTAATATTTTCATAGAAATTAGGCTGGAGAAAGAAGGAAGAAATGGTTTTCTTAAATACCTACAAAAAAG

FIGURE 497B

TTACTGTGGTATCTATGAGTTATCATCTTAGCTGTGTTAAAAATGAATTTTTACTATGGCAGATATGGTATGGAT
CGTAAAATTTTAAGCACTAAAAATTTTTTCATAACCTTTCATAATAAAGTTTAATAATAGGTTTATTAACTGAAT
TTCATTAGTTTTTTAAAAGTGTTTTTGGTTTGTGTATATATACATATACAAATACAACATTTACAATAAATAAAA
TACTTGAAATTCTCAAAAAAAAAAAAAAAAAAAAAAAAAA

FIGURE 498

MGSGARFPSGTLRVRWLLLLGLVGPVLGAARPGFQQTSHLSSYEIITPWRLTRERREAPRPYSKQVSYVIQAEGK
EHIIHLERNKDLLPEDFVVYTYNKEGTLITDHPNIQNHCHYRGYVEGVHNSSIALSDCFGLRGLLHLENASYGIE
PLQNSSHFEHIIYRMDDVYKEPLKCGVSNKDIEKETAKDEEEEPPSMTQLLRRRRAVLPQTRYVELFIVVDKERY
DMMGRNQTAVREEMILLANYLDSMYIMLNIRIVLVGLEIWTNGNLINIVGGAGDVLGNFVQWREKFLITRRRHDS
AQLVLKKGFGGTAGMAFVGTVCSRSHAGGINVFGQITVETFASIVAHELGHNLGMNHDDGRDCSCGAKSCIMNSG
ASGSRNFSSCSAEDFEKLTLNKGGNCLLNIPKPDEAYSAPSCGNKLVDAGEECDCGTPKECELDPCCEGSTCKLK
SFAECAYGDCCKDCRFLPGGTLCRGKTSECDVPEYCNGSSQFCQPDVFIQNGYPCQNNKAYCYNGMCQYYDAQCQ
VIFGSKAKAAPKDCFIEVNSKGDRFGNCGFSGNEYKKCATGNALCGKLQCENVQEIPVFGIVPAIIQTPSRGTKC
WGVDFQLGSDVPDPGMVNEGTKCGAGKICRNFQCVDASVLNYDCDVQKKCHGHGVCNSNKNCHCENGWAPPNCET
KGYGGSVDSGPTYNEMNTALRDGLLVFFFLIVPLIVCAIFIFIKRDQLWRSYFRKKRSQTYESDGKNQANPSRQP
GSVPRHVSPVTPPREVPIYANRFAVPTYAAKQPQQFPSRPPPPQPKVSSQGNLIPARPAPAPPLYSSLT

FIGURE 499

CGTCCGTGACAAG**ATG**AAGCTCATCATCCTGGAGCACTATTCTCAGGCGAGCGAGTGGGCGGCTAAATACATCAG
GAACCGTATCATCCAGTTTAACCCAGGGCCAGAGAAGTACTTCACCCTGGGGCTCCCCACTGGGAGTACCCCACT
TGGCTGCTACAAGAAGCTGATTGAATACTATAAGAATGGGGACCTGTCCTTTAAATATGTGAAGACCTTCAACAT
GGATGAGTACGTGGGCCTTCCTCGAGACCACCCGGAGAGTTACCACTCCTTCATGTGGAACAACTTCTTCAAGCA
CATTGACATCCACCCAGAAAACACCCACATTCTGGATGGGAATGCAGTCGACCTACAGGCAGAATGTGATGCCTT
TGAAGAGAAGATCAAGGCTGCAGGTGGGATCGAGCTATTTGTTGGAGGCATCGGCCCTGATGGACACATTGCCTT
CAACGAGCCAGGCTCCAGTCTGGTGTCCAGGACCCGTGTGAAGACGCTGGCCATGGATACCATCCTGGCCAATGC
TAGGTTCTTCGATGGAGAACTCACCAAGGTGCCCACCATGGCCTTGACGGTGGGGGTGGGCACTGTCATGGATGC
TAGAGAGGTGATGATCCTTATCACAGGTGCTCACAAGGCATTTGCTCTGTACAAGGCCATCGAGGAGGGAGTGAA
CCACATGTGGACCGTGTCTGCCTTCCAGCAGCATCCCCGCACCGTGTTTGTGTGTGACGAGGATGCCACCTTGGA
GCTGAAAGTGAAGACTGTCAAGTATTTCAAAGGTTTAATGCTTGTTCATAACAAGTTGGTGGACCCCTTGTACAG
TATCAAAGAGAAAGAAACTGAGAAAAGCCAATCTTCGAAGAAACCATACAGCGAT**TAG**CCTGTGCTGGGACCTAG
TGTCAAGTACCCATAGGGAAAGGCAGGTCTTTCTGGAAATTGTCTTTAGAAGAAAGAATTGTATTTCTTTAATCT
AGTATGGTTACTCCAGATAAGTGGGTGAACTTATTGTTCTTGGCCATGAGGCTGGGAGCCTAGTCACGGAGTTTA
GCTATAGGGAGAATGTTTGTAACTTAATCAGAAAAAAAATATCTGCAAAATGTACTCCATCATTTTGATGTCTGC
CAAACCCAGGTTGGGAGTTTTAAACTTTTTGTTCTGCTTCAGCCATGGTTCACACATATGACACACTCCCGTCAG
GAATTTCTCTCCTTACACGCACTGATTTTCAAGTGGGAGGGAATTAGGGGCTTATGTATATTGGATACCACCTCT
TGAGAGTCCTTCTTGCACAGGCCTGCCCCTTGGTTGAGAACCATTGTTCCAAGTGAAGGCACAAACTCTCAATAT
CTAAAATAAGTGCAAGGAAGCAGTCTCTTTGGTCAGTAACAAGTGCAATGGAAAGAAAACGATCCCTTCCTTCTT
CCACTTTCACAGCTTTTCTCTGAACTAGGAGAACCTGGGGGTGGATTGGGTGGGTGGGGCCAAAGAGGAGGCTT
CTATTGATAAATCCAGAGCCTCAAGGGCCCAGCCACGTCAAACTTCTCTCCCTCAGGGACTCTCCAGCACCAAA
AGGCAGAAGGTGGAAGCCGTTTTTCCCCCAGAGCCCTGTGTTTTTGTGAAAGGCCTCACTGTGGCTCCTCTGTTT
TACATACTCATTAGTAAGTGGGAGGTCCACTGGGCAACAGACACTGCCACAATTTCAGTGTTGTGTTCAGCCAA
GGGGACGGTCTGGACAGGCAGCTTAAGTGTGAGTTTAGTCACAACTCCTGAGTGTCCCGCTCTCCTGCTTACCTA
GGAGGTGAGTGCCAGGAAAATACACCAAATGCTTCTAGTATTGTTTCCCCACTTAAAATAGTCCTGCTTAAATTC
ACATGGTGTGGTCTGATGTTCTGAGAGCATCAGGAAATACAACCCTTTTGCCCATTTACCCTTCTCCCCGGATCC
CAAGGTGGTCTGTTGCTCTGGCTTCCTTTCATTGTCTTAGGCCTTCATGGAGTGGATGCTGCCTCCTCCTGGCTG
TTTTTGTGCCTGTTTGAAGCTACTGCTGCCTCCATTTCTGGGAAAGACCTTTGAGAGCCTAGCCCAGGCCTAAGG
GCTATGTTTGGTACCAGTGTTTTGTCTTTAGCTTTTCTATGTGATTGTGCCGTCATTCTGTTTTAAGCTCATGGA
TCAATGGATTTGTTTACAATGTGATATTTTCTATTAAATCCAGTATTTTCAAAAAAAAAAAAAA

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FIGURE 500

MKLIILEHYSQASEWAAKYIRNRIIQFNPGPEKYFTLGLPTGSTPLGCYKKLIEYYKNGDLSFKYVKTFNMDEYV
GLPRDHPESYHSFMWNNFFKHIDIHPENTHILDGNAVDLQAECDAFEEKIKAAGGIELFVGGIGPDGHIAFNEPG
SSLVSRTRVKTLAMDTILANARFFDGELTKVPTMALTVGVGTVMDAREVMILITGAHKAFALYKAIEEGVNHMWT
VSAFQQHPRTVFVCDEDATLELKVKTVKYFKGLMLVHNKLVDPLYSIKEKETEKSQSSKKPYSD

FIGURE 501

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AAAACAGCCGGGGCTCCAGCGGGAGAACGATAATGCAAAGTGCTATGTTCTTGGCTGTTCAACACGACTGCAGAC
CCATGGACAAGAGCGCAGGCAGTGGCCACAAGAGCGAGGAGAAGCGAGAAAAGATGAAACGGACCCTTTTAAAAG
ATTGGAAGACCCGTTTGAGCTACTTCTTACAAAATTCCTCTACTCCTGGGAAGCCCAAAACCGGCAAAAAAAGCA
AACAGCAAGCTTTCATCAAGCCTTCTCCTGAGGAAGCACAGCTGTGGTCAGAAGCATTTGACGAGCTGCTAGCCA
GCAAATATGGTCTTGCTGCATTCAGGGCTTTTTTAAAGTCGGAATTCTGTGAAGAAAATATTGAATTCTGGCTGG
CCTGTGAAGACTTCAAAAAAACCAAATCACCCCAAAAGCTGTCCTCAAAAGCAAGGAAAATATATACTGACTTCA
TAGAAAAGGAAGCTCCAAAAGAGATAAACATAGATTTTCAAACCAAAACTCTGATTGCCCAGAATATACAAGAAG
CTACAAGTGGCTGCTTTACAACTGCCCAGAAAAGGGTATACAGCTTGATGGAGAACAACTCTTATCCTCGTTTCT
TGGAGTCAGAATTCTACCAGGACTTGTGTAAAAAGCCACAAATCACCACAGAGCCTCATGCTACATGAAATGTAA
AAGGGAGCCCAGAAATGGAGGACATTTCATTCTTTTTCCTGAGGGGAAGGACTGTGACCTGCCATAAAGACTGAC
CTTGAATTCAGCCTGGGTGTTCAGGAAACATCACTCAGAACTATTGATTCAAAGTTGGGTAGTGAATCAGGAAGC
CAGTAACTGACTAGGAGAAGCTGGTATCAGAACAGCTTCCCTCACTGTGTACAGAACGCAAGAAGGGAATAGGTG
GTCTGAACGTGGTGTCTCACTCTGAAAAGCAGGAATGTAAGATGATGAAAGAGACAATGTAATACTGTTGGTCCA
AAAGCATTTAAAATCAATAGATCTGGGATTATGTGGCCTTAGGTAGCTGGTTGTACATCTTTCCCTAAATCGATC
CATGTTACCACATAGTAGTTTTAGTTTAGGATTCAGTAACAGTGAAGTGTTTACTATGTGCAAGGGTATTGAAGT
TCTTATGACCACAGATCATCAGTACTGTTGTCTCATGTAATGCTAAAACTGAAATGGTCCGTGTTTGCATTGTTA
AAAATGATGTGTGAAATAGAATGAGTGCTATGGTGTTGAAAACTGCAGTGTCCGTTATGAGTGCCAAAAATCTGT
CTTGAAGGCAGCTACACTTTGAAGTGGTCTTTGAATACTTTTAATAAATTTATTTTGATAAATAATATTG
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FIGURE 502

MQSAMFLAVQHDCRPMDKSAGSGHKSEEKREKMKRTLLKDWKTRLSYFLQNSSTPGKPKTGKKSKQQAFIKPSPE
EAQLWSEAFDELLASKYGLAAFRAFLKSEFCEENIEFWLACEDFKKTKSPQKLSSKARKIYTDFIEKEAPKEINI
DFQTKTLIAQNIQEATSGCFTTAQKRVYSLMENNSYPRFLESEFYQDLCKKPQITTEPHAT

FIGURE 503

CAGACGGCGCTGAGCGCGGCGGCGGCGGGAGCGGCGTCGAGTGTCTCCGTGCGCCCGTCTGTGGCCAAGCAGCCA
GCAGCCTAGCAGCCAGTCAGCTTGCCGCCGGCGGCCAAGCAGCCAACC**ATG**CTCAACTTCGGTGCCTCTCTCCAG
CAGACTGCGGAGGAAAGAATGGAAATGATTTCTGAAAGGCCAAAAGAGAGTATGTATTCCTGGAACAAAACTGCA
GAGAAAAGTGATTTTGAAGCTGTAGAAGCACTTATGTCAATGAGCTGCAGTTGGAAGTCTGATTTTAAGAAATAC
GTTGAAAACAGACCTGTTACACCAGTATCTGATTGTCAGAGGAAGAGAATCTGCTTCCGGGAACACCTGATTTT
CATACAATCCCAGCATTTTGTTTGACTCCACCTTACAGTCCTTCTGACTTTGAACCCTCTCAAGTGTCAAATCTG
ATGGCACCAGCGCCATCTACTGTACACTTCAAGTCACTCTCAGATACTGCCAAACCTCACATTGCCGCACCTTTC
AAAGAGGAAGAAAAGAGCCCAGTATCTGCCCCCAAACTCCCCAAAGCTCAGGCAACAAGTGTGATTCGTCATACA
GCTGATGCCCAGCTATGTAACCACCAGACCTGCCCAATGAAAGCAGCCAGCATCCTCAACTATCAGAACAATTCT
TTTAGAAGAAGAACCCACCTAAATGTTGAGGCTGCAAGAAAGAACATACCATGTGCCGCTGTGTCACCAAACAGA
TCCAAATGTGAGAGAAACACAGTGGCAGATGTTGATGAGAAAGCAAGTGCTGCACTTTATGACTTTTCTGTGCCT
TCCTCAGAGACGGTCATCTGCAGGTCTCAGCCAGCCCCTGTGTCCCCACAACAGAAGTCAGTGTTGGTCTCTCCA
CCTGCAGTATCTGCAGGGGGAGTGCCACCTATGCCGGTCATCTGCCAGATGGTTCCCCTTCCTGCCAACAACCCT
GTTGTGACAACAGTCGTTCCCAGCACTCCTCCCAGCCAGCCACCAGCCGTTTGCCCCCCTGTTGTGTTCATGGGC
ACACAAGTCCCCAAAGGCGCTGTCATGTTTGTGGTACCCCAGCCCGTTGTGCAGAGTTCAAAGCCTCCGGTGGTG
AGCCCGAATGGCACCAGACTCTCTCCCATTGCCCCTGCTCCTGGGTTTTCCCCTTCAGCAGCAAAAGTCACTCCT
CAGATTGATTCATCAAGGATAAGGAGTCACATCTGTAGCCACCCAGGATGTGGCAAGACATACTTTAAAAGTTCC
CATCTGAAGGCCCACACGAGGACGCACACAGGAGAAAAGCCTTTCAGCTGTAGCTGGAAAGGTTGTGAAAGGAGG
TTTGCCCGTTCTGATGAACTGTCCAGACACAGGCGAACCCACACGGGTGAGAAGAAATTTGCGTGCCCCATGTGT
GACCGGCGGTTCATGAGGAGTGACCATTTGACCAAGCATGCCCGGCGCCATCTATCAGCCAAGAAGCTACCAAAC
TGGCAGATGGAAGTGAGCAAGCTAAATGACATTGCTCTACCTCCAACCCCTGCTCCCACACAG**TGA**CAGACCGGA
AAGTGAAGAGTCAGAACTAACTTTGGTCTCAGCGGGAGCCAGTGGTGATGTAAAAATGCTTCCACTGCAAGTCTG
TGGCCCCACAACGTGGGCTTAAAGCAGAAGCCCCACAGCCTGGCACGAAGGCCCCGCCTGGGTTAGGTGACTAAA
AGGGCTTCGGCCACAGGCAGGTCACAGAAAGGCAGGTTTCATTTCTTATCACATAAGAGAGATGAGAAAGCTTTT
ATTCCTTTGAATATTTTTTGAAGGTTTCAGATGAGGTCAACACAGGTAGCACAGATTTTGAATCTGTGTGCATAT
TTGTTACTTTACTTTTGCTGTTTATACTTGAGACCAACTTTTCAATGTGATTCTTCTAAAGCACTGGTTTCAAGA
ATATGGAGGCTGGAAGGAAATAAACATTACGGTACAGACATGGAGATGTAAAATGAGTTTGTATTATTACAAATA
TTGTCATCTTTTTCTAGAGTTATCTTCTTTATTATTCCTAGTCTTTCCAGTCAACATCGTGGATGTAGTGATTAA
ATATATCTAGAACTATCATTTTTACACTATTGTGAATATTTGGAATTGAACGACTGTATATTGCTAAGAGGGCCC
AAAGAATTGGAATCCTCCTTAATTTAATTGCTTTGAAGCATAGCTACAATTTGTTTTTGCATTTTTGTTTTGAAA
GTTAACAAATGACTGTATCTAGGCATTTCATTATGCTTTGAACTTTAGTTTGCCTGCAGTTTCTTGTGTAGATT
TGAAAATTGTATACCAATGTGTTTTCTGTAGACTCTAAGATACACTGCACTTTGTTTAGAAAAAAAACTGAAGAT
GAAATATATATTGTAAAGAAGGGATATTAAGAATCTTAGATAACTTCTTGAAAAAGATGGCTTATGTCATCAGTA
AAGTACCTTTATGTTATGAGGATATAATGTGTGCTTATTGAATTAGAAAATTAGTGACCATTATTCACAGGTGG
ACAAATGTTGTCCTGTTAATTTATAGGAGTTTTTTGGGGATGTGGAGGTAGTTGGGTAGAAAAATTATTAGAACA
TTCACTTTTGTTAACAGTATTTCTCTTTTATTCTGTTATATAGTGGATGATACACAGTGGCAAAACAAAAGTA
CATTGCTTAAAATATATAGTGAAAAATGTCACTATATCTTCCCATTTAACATTGTTTTTGTATATTGGGTGTAGA
TTTCTGACATCAAAACTTGGACCCTTGGAAAACAAAGTTTTAATTAAAAAAAATCCTTGTGACTTACAATTTGC
ACAATATTTCTTTTGTTGTACTTTATATCTTGTTACAATAAAGAATTC

FIGURE 504

MLNFGASLQQTAEERMEMISERPKESMYSWNKTAEKSDFEAVEALMSMSCSWKSDFKKYVENRPVTPVSDLSEEE
NLLPGTPDFHTIPAFCLTPPYSPSDFEPSQVSNLMAPAPSTVHFKSLSDTAKPHIAAPFKEEEKSPVSAPKLPKA
QATSVIRHTADAQLCNHQTCPMKAASILNYQNNSFRRRTHLNVEAARKNIPCAAVSPNRSKCERNTVADVDEKAS
AALYDFSVPSSETVICRSQPAPVSPQQKSVLVSPPAVSAGGVPPMPVICQMVPLPANNPVVTTVVPSTPPSQPPA
VCPPVVFMGTQVPKGAVMFVVPQPVVQSSKPPVVSPNGTRLSPIAPAPGFSPSAAKVTPQIDSSRIRSHICSHPG
CGKTYFKSSHLKAHTRTHTGEKPFSCSWKGCERRFARSDELSRHRRTHTGEKKFACPMCDRRFMRSDHLTKHARR
HLSAKKLPNWQMEVSKLNDIALPPTPAPTQ

FIGURE 505

GGGACAGCGGGCAGGGAAAGCCGCGGGAAGGGTACTCCAGGCGAGAGGCGGACGCGAGTCGTCGTGGCAGGAAAA
GTGACTAGCTCCCCTTCGTTGTCAGCCAGGGACGAGAACACAGCCACGCTCCCACCCGGCTGCCAACGATCCCTC
GGCGGCG**ATG**TCGGCCGCCGGTGCCCGAGGCCTGCGGGCCACCTACCACCGGCTCCTCGATAAAGTGGAGCTGAT
GCTGCCCGAGAAATTGAGGCCGTTGTACAACCATCCAGCAGGTCCCAGAACAGTTTTCTTCTGGGCTCCAATTAT
GAAATGGGGGTTGGTGTGTGCTGGATTGGCTGATATGGCCAGACCTGCAGAAAAACTTAGCACAGCTCAATCTGC
TGTTTTGATGGCTACAGGGTTTATTTGGTCAAGATACTCACTTGTAATTATTCCAAAAAATTGGAGTCTGTTTGC
TGTTAATTTCTTTGTGGGGGCAGCAGGAGCCTCTCAGCTTTTTCGTATTTGGAGATATAACCAAGAACTAAAAGC
TAAAGCACACAAA**TAA**AAGAGTTCCTGATCACCTGAACAATCTAGATGTGGACAAAACCATTGGGACCTAGTTTA
TTATTTGGTTATTGATAAAGCAAAGCTAACTGTGTGTTTAGAAGGCACTGTAACTGGTAGCTAGTTCTTGATTCA
ATAGAAAAATGCAGCAAACTTTTAATAACAGTCTCTCTACATGACTTAAGGAACTTATCTATGGATATTAGTAAC
ATTTTTCTACCATTTGTCCGTAATAAACCATACTTGCTCGTAAAAAAAAAAAAAAAAAAAA

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FIGURE 506

MSAAGARGLRATYHRLLDKVELMLPEKLRPLYNHPAGPRTVFFWAPIMKWGLVCAGLADMARPAEKLSTAQSAVL
MATGFIWSRYSLVIIPKNWSLFAVNFFVGAAGASQLFRIWRYNQELKAKAHK

FIGURE 507

ATGTGGGGCGACCTCTGGCTCCTCCCGCCTGCCTCTGCCAATCCGGGCACTGGGACAGAGGCTGAGTTTGAGAAA
GCTGCAGAGGAGGTTAGGCACCTTAAGACCAAGCCATCGGATGAGGAGATGCTGTTCATCTATGGCCACTACAAA
CAAGCAACTGTGGGCGACATAAATACAGAACGGCCCGGGATGTTGGACTTCACGGGCAAGGCCAAGTGGGATGCC
TGGAATGAGCTGAAAGGGACTTCCAAGGAAGATGCCATGAAAGCTTACATCAACAAAGTAGAAGAGCTAAAGAAA
AAATACGGGATA**TGA**GAGACTGGATTTGGTTACTGTGCCATGTGTTTATCCTAAACTGAGACAATGCCTTGTTTT
TTTCTAATACCGTGGATGGTGGGAATTCGGGAAAATAACCAGTTAAACCAGCTACTCAAGGCTGCTCACCATACG
GCTCTAACAGATTAGGGGCTAAAACGATTACTGACTTTCCTTGAGTAGTTTTTATCTGAAATCAATTAAAAGTGT
ATTTGTTACTTT

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FIGURE 508

MWGDLWLLPPASANPGTGTEAEFEKAAEEVRHLKTKPSDEEMLFIYGHYKQATVGDINTERPGMLDFTGKAKWDA
WNELKGTSKEDAMKAYINKVEELKKKYGI

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FIGURE 509A

ACTCTGGAGTGGGAGTGGGAGCGAGCGCTTCTGCGACTCCAGTTGTGAGAGCCGCAAGGGCATGGGAATTGACGC
CACTCACCGACCCCCAGTCTCAATCTCAACGCTGTGAGGAAACCTCGACTTTGCCAGGTCCCCAAGGGCAGCGGG
GCTCGGCGAGCGAGGCACCCTTCTCCGTCCCCATCCCAATCCAAGCGCTCCTGGCACTGACGACGCCAAGAGACT
CGAGTGGGAGTTAAAGCTTCCAGTGAGGGCAGCAGGTGTCCAGGCCGGGCCTGCGGGTTCCTGTTGACGTCTTGC
CCTAGGCAAAGGTCCCAGTTCCTTCTCGGAGCCGGCTGTCCCGCGCCACTGGAAACCGCACCTCCCCGCAGC**ATG**

GGCACCAGCCTCAGCCCGAACGACCCTTGGCCGCTAAACCCGCTGTCCATCCAGCAGACCACGCTCCTGCTACTC
CTGTCGGTGCTGGCCACTGTGCATGTGGGCCAGCGGCTGCTGAGGCAACGGAGGCGGCAGCTCCGGTCCGCGCCC
CCGGGCCCGTTTGCGTGGCCACTGATCGGAAACGCGGCGGCGGTGGGCCAGGCGGCTCACCTCTCGTTCGCTCGC
CTGGCGCGGCGCTACGGCGACGTTTTCCAGATCCGCCTGGGCAGCTGCCCCATAGTGGTGCTGAATGGCGAGCGC
GCCATCCACCAGGCCCTGGTGCAGCAGGGCTCGGCCTTCGCCGACCGGCCGGCCTTCGCCTCCTTCCGTGTGGTG
TCCGGCGGCCGCAGCATGGCTTTCGGCCACTACTCGGAGCACTGGAAGGTGCAGCGGCGCGCAGCCCACAGCATG
ATGCGCAACTTCTTCACGCGCCAGCCGCGCAGCCGCCAAGTCCTCGAGGGCCACGTGCTGAGCGAGGCGCGCGAG
CTGGTGGCGCTGCTGGTGCGCGGCAGCGCGGACGGCGCCTTCCTCGACCCGAGGCCGCTGACCGTCGTGGCCGTG
GCCAACGTCATGAGTGCCGTGTGTTTCGGCTGCCGCTACAGCCACGACGACCCCGAGTTCCGTGAGCTGCTCAGC
CACAACGAAGAGTTCGGGCGCACGGTGGGCGCGGGCAGCCTGGTGGACGTGATGCCCTGGCTGCAGTACTTCCCC
AACCCGGTGCGCACCGTTTTCCGCGAATTCGAGCAGCTCAACCGCAACTTCAGCAACTTCATCCTGGACAAGTTC
TTGAGGCACTGCGAAAGCCTTCGGCCCGGGGCCGCCCCCCGCGACATGATGGACGCCTTTATCCTCTCTGCGGAA
AAGAAGGCGGCCGGGGACTCGCACGGTGGTGGCGCGCGGCTGGATTTGGAGAACGTACCGGCCACTATCACTGAC
ATCTTCGGCGCCAGCCAGGACACCCTGTCCACCGCGCTGCAGTGGCTGCTCCTCCTCTTCACCAGGTATCCTGAT
GTGCAGACTCGAGTGCAGGCAGAATTGGATCAGGTCGTGGGGAGGGACCGTCTGCCTTGTATGGGTGACCAGCCC
AACCTGCCCTATGTCCTGGCCTTCCTTTATGAAGCCATGCGCTTCTCCAGCTTTGTGCCTGTCACTATTCCTCAT
GCCACCACTGCCAACACCTCTGTCTTGGGCTACCACATTCCCAAGGACACTGTGGTTTTTGTCAACCAGTGGTCT
GTGAATCATGACCCAGTGAAGTGGCCTAACCCGGAGAACTTTGATCCAGCTCGATTCTTGGACAAGGATGGCCTC
ATCAACAAGGACCTGACCAGCAGAGTGATGATTTTTTCAGTGGGCAAAAGGCGGTGCATTGGCGAAGAACTTTCT
AAGATGCAGCTTTTTCTCTTCATCTCCATCCTGGCTCACCAGTGCGATTTCAGGGCCAACCCAAATGAGCCTGCG
AAAATGAATTTCAGTTATGGTCTAACCATTAAACCCAAGTCATTTAAAGTCAATGTCACTCTCAGAGAGTCCATG
GAGCTCCTTGATAGTGCTGTCCAAAATTTACAAGCCAAGGAAACTTGCCAA**TAA**GAAGCAAGAGGCAAGCTGAAA
TTTTAGAAATATTCACATCTTCGGAGATGAGGAGTAAAATTCAGTTTTTTTCCAGTTCCTCTTTTGTGCTGCTTC
TCAATTAGCGTTTAAGGTGAGCATAAATCAACTGTCCATCAGGTGAGGTGTGCTCCATACCCAGCGGTTCTTCAT
GAGTAGTGGGCTATGCAGGAGCTTCTGGGAGATTTTTTTGAGTCAAAGACTTAAAGGGCCCAATGAATTATTATA
TACATACTGCATCTTGGTTATTTCTGAAGGTAGCATTCTTTGGAGTTAAAATGCACATATAGACACATACACCCA
AACACTTACACCAAACTACTGAATGAAGAAGTATTTTGGTAACCAGGCCATTTTTGGTGGGAATCCAAGATTGGT
CTCCCATATGCAGAAATAGACAAAAAGTATATTAAACAAAGTTTCAGAGTATATTGTTGAAGAGACAGAGACAAG
TAATTTCAGTGTAAAGTGTGTGATTGAAGGTGATAAGGGAAAAGATAAAGACCAGAAATTCCCTTTTCACCTTTT
CAGGAAAATAACTTAGACTCTAGTATTTATGGGTGGATTTATCCTTTTGCCTTCTGGTATACTTCCTTACTTTTA
AGGATAAATCATAAAGTCAGTTGCTCAAAAAGAAATCAATAGTTGAATTAGTGAGTATAGTGGGGTTCCATGAGT
TATCATGAATTTTAAAGTATGCATTATTAAATTGTAAAACTCCAAGGTGATGTTGTACCTCTTTTGCTTGCCAAA
GTACAGAATTTGAATTATCAGCAAAGAAAAAAAAAAAGCCAGCCAAGCTTTAAATTATGTGACCATAATGTACT
GATTTCAGTAAGTCTCATAGGTTAAAAAAAAAAGTCACCAAATAGTGTGAAATATATTACTTAACTGTCCGTAAG
CAGTATATTAGTATTATCTTGTTCAGGAAAAGGTTGAATAATATATGCCTTGTGTAATATTGAAAATTGAAAGT
ACAACTAACGCAACCAAGTGTGCTAAAAATGAGCTTGATTAAATCAACCACCTATTTTTGACATGGAAATGAAGC
AGGGTTTCTTTTCTTCACTCAAATTTTGGCGAATCTCAAAATTAGATCCTAAGATGTGTTCTTATTTTTATAACA
TCTTTATTGAAATTCTATTTATAATACAGAATCTTGTTTTGAAAATAACCTAATTAATATATTAAAATTCCAAAT
TCATGGCATGCTTAAATTTTAACTAAATTTTAAAGCCATTCTGATTATTGAGTTCCAGTTGAAGTTAGTGGAAAT
CTGAACATTCTCCTGTGGAAGGCAGAGAAATCTAAGCTGTGTCTGCCCAATGAATAATGGAAAATGCCATGAATT
ACCTGGATGTTCTTTTTACGAGGTGACAAGAGTTGGGGACAGAACTCCCATTACAACTGACCAAGTTTCTCTTCT
AGATGATTTTTTGAAAGTTAACATTAATGCCTGCTTTTTGGAAAGTCAGAATCAGAAGATAGTCTTGGAAGCTGT
TTGGAAAAGACAGTGGAGATGAGGTCAGTTGTGTTTTTTAAGATGGCAATTACTTTGGTAGCTGGGAAAGCATAA

FIGURE 509B

AGCTCAAATGAAATGTATGCATTCACATTTAGAAAAGTGAATTGAAGTTTCAAGTTTTAAAGTTCATTGCAATTA
AACTTCCAAAGAAAGTTCTACAGTGTCCTAAGTGCTAAGTGCTTATTACATTTTATTAAGCTTTTTGGAATCTTT
GTACCAAAATTTTAAAAAAGGGAGTTTTTGATAGTTGTGTGTATGTGTGTGTGGGGTGGGGGGATGGTAAGAGAA
AAGAGAGAAACACTGAAAAGAAGGAAAGATGGTTAAACATTTTCCCACTCATTCTGAATTAATTAATTTGGAGCA
CAAAATTCAAAGCATGGACATTTAGAAGAAAGATGTTTGGCGTAGCAGAGTTAAATCTCAAATAGGCTATTAAAA
AAGTCTACAACATAGCAGATCTGTTTTGTGGTTTGGAATATTAAAAAACTTCATGTAATTTTATTTTAAAATTTC
ATAGCTGTACTTCTTGAATATAAAAAATCATGCCAGTATTTTTAAAGGCATTAGAGTCAACTACACAAAGCAGGC
TTGCCCAGTACATTTAAATTTTTTGGCACTTGCCATTCCAAAATATTATGCCCCACCAAGGCTGAGACAGTGAAT
TTGGGCTGCTGTAGCCTATTTTTTTAGATTGAGAAATGTGTAGCTGCAAAAATAATCATGAACCAATCTGGATGC
CTCATTATGTCAACCAGGTCCAGATGTGCTATAATCTGTTTTTACGTATGTAGGCCCAGTCGTCATCAGATGCTT
GCGGCAAAAGAAAGCTGTGTTTATATGGAAGAAAGTAAGGTGCTTGGAGTTTACCTGGCTTATTTAATATGCTTA
TAACCTAGTTAAAGAAAGGAAAAGAAAACAAAAAACGAATGAAAATAACTGAATTTGGAGGCTGGAGTAATCAGA
TTACTGCTTTAATCAGAAACCCTCATTGTGTTTCTACCGGAGAGAGAATGTATTTGCTGACAACCATTAAAGTCA
GAAGTTTTACTCCAGGTTATTGCAATAAAGTATAATGTTTATTAAATGCTTCATTTGTATGTCAAAGCTTTGACT
CTATAAGCAAATTGCTTTTTTCCAAAACAAAAAGATGTCTCAGGTTTGTTTTGTGAATTTTCTAAAAGCTTTCAT
GTCCCAGAACTTAGCCTTTACCTGTGAAGTGTTACTACAGCCTTAATATTTTCCTAGTAGATCTATATTAGATCA
AATAGTTGCATAGCAGTATATGTTAATTTGTGTGTTTTTAGCTGTGACACAACTGTGTGATTAAAAGGTATACTT
TAGTAGACATTTATAACTCAAGGATACCTTCTTATTTAATCTTTTCTTATTTTTGTACTTTATCATGAATGCTTT
TAGTGTGTGCATAATAGCTACAGTGCATAGTTGTAGACAAAGTACATTCTGGGGAAACAACATTTATATGTAGCC
TTTACTGTTTGATATACCAAATTAAAAAAAAATTGTATCTCATTACTTATACTGGGACACCATTACCAAAATAAT
AAAAATCACTTTCATAATCTTGAAAAAA

FIGURE 510

MGTSLSPNDPWPLNPLSIQQTTLLLLLSVLATVHVGQRLLRQRRRQLRSAPPGPFAWPLIGNAAAVGQAAHLSFA
RLARRYGDVFQIRLGSCPIVVLNGERAIHQALVQQGSAFADRPAFASFRVVSGGRSMAFGHYSEHWKVQRRAAHS
MMRNFFTRQPRSRQVLEGHVLSEARELVALLVRGSADGAFLDPRPLTVVAVANVMSAVCFGCRYSHDDPEFRELL
SHNEEFGRTVGAGSLVDVMPWLQYFPNPVRTVFREFEQLNRNFSNFILDKFLRHCESLRPGAAPRDMMDAFILSA
EKKAAGDSHGGGARLDLENVPATITDIFGASQDTLSTALQWLLLLFTRYPDVQTRVQAELDQVVGRDRLPCMGDQ
PNLPYVLAFLYEAMRFSSFVPVTIPHATTANTSVLGYHIPKDTVVFVNQWSVNHDPVKWPNPENFDPARFLDKDG
LINKDLTSRVMIFSVGKRRCIGEELSKMQLFLFISILAHQCDFRANPNEPAKMNFSYGLTIKPKSFKVNVTLRES
MELLDSAVQNLQAKETCQ

FIGURE 511A

GCGACCGAGAAG**ATG**CCCGCCCTGCGCCCCGCTCTGCTGTGGGCGCTGCTGGCGCTCTGGCTGTGCTGCGCGACC
CCCGCGCATGCATTGCAGTGTCGAGATGGCTATGAACCCTGTGTAAATGAAGGAATGTGTGTTACCTACCACAAT
GGCACAGGATACTGCAAATGTCCAGAAGGCTTCTTGGGGGAATATTGTCAACATCGAGACCCCTGTGAGAAGAAC
CGCTGCCAGAATGGTGGGACTTGTGTGGCCCAGGCCATGCTGGGGAAAGCCACGTGCCGATGTGCCTCAGGGTTT
ACAGGAGAGGACTGCCAGTACTCGACATCTCATCCATGCTTTGTGTCTCGACCCTGCCTGAATGGCGGCACATGC
CATATGCTCAGCCGGGATACCTATGAGTGCACCTGTCAAGTCGGGTTTACAGGTAAGGAGTGCCAATGGACCGAT
GCCTGCCTGTCTCATCCCTGTGCAAATGGAAGTACCTGTACCACTGTGGCCAACCAGTTCTCCTGCAAATGCCTC
ACAGGCTTCACAGGGCAGAAATGTGAGACTGATGTCAATGAGTGTGACATTCCAGGACACTGCCAGCATGGTGGC
ACCTGCCTCAACCTGCCTGGTTCCTACCAGTGCCAGTGCCTTCAGGGCTTCACAGGCCAGTACTGTGACAGCCTG
TATGTGCCCTGTGCACCCTCGCCTTGTGTCAATGGAGGCACCTGTCGGCAGACTGGTGACTTCACTTTTGAGTGC
AACTGCCTTCCAGGTTTTGAAGGGAGCACCTGTGAGAGGAATATTGATGACTGCCCTAACCACAGGTGTCAGAAT
GGAGGGGTTTGTGTGGATGGGGTCAACACTTACAACTGCCGCTGTCCCCCACAATGGACAGGACAGTTCTGCACA
GAGGATGTGGATGAATGCCTGCTGCAGCCCAATGCCTGTCAAAATGGGGGCACCTGTGCCAACCGCAATGGAGGC
TATGGCTGTGTATGTGTCAACGGCTGGAGTGGAGATGACTGCAGTGAGAACATTGATGATTGTGCCTTCGCCTCC
TGTACTCCAGGCTCCACCTGCATCGACCGTGTGGCCTCCTTCTCTTGCATGTGCCCAGAGGGGAAGGCAGGTCTC
CTGTGTCATCTGGATGATGCATGCATCAGCAATCCTTGCCACAAGGGGGCACTGTGTGACACCAACCCCCTAAAT
GGGCAATATATTTGCACCTGCCCACAAGGCTACAAAGGGGCTGACTGCACAGAAGATGTGGATGAATGTGCCATG
GCCAATAGCAATCCTTGTGAGCATGCAGGAAAATGTGTGAACACGGATGGCGCCTTCCACTGTGAGTGTCTGAAG
GGTTATGCAGGACCTCGTTGTGAGATGGACATCAATGAGTGCCATTCAGACCCCTGCCAGAATGATGCTACCTGT
CTGGATAAGATTGGAGGCTTCACATGTCTGTGCATGCCAGGTTTCAAAGGTGTGCATTGTGAATTAGAAATAAAT
GAATGTCAGAGCAACCCTTGTGTGAACAATGGGCAGTGTGTGGATAAAGTCAATCGTTTCCAGTGCCTGTGTCCT
CCTGGTTTCACTGGGCCAGTTTGCCAGATTGATATTGATGACTGTTCCAGTACTCCGTGTCTGAATGGGGCAAAG
TGTATCGATCACCCGAATGGCTATGAATGCCAGTGTGCCACAGGTTTCACTGGTGTGTTGTGTGAGGAGAACATT
GACAACTGTGACCCCGATCCTTGCCACCATGGTCAGTGTCAGGATGGTATTGATTCCTACACCTGCATCTGCAAT
CCCGGGTACATGGGCGCCATCTGCAGTGACCAGATTGATGAATGTTACAGCAGCCCTTGCCTGAACGATGGTCGC
TGCATTGACCTGGTCAATGGCTACCAGTGCAACTGCCAGCCAGGCACGTCAGGGGTTAATTGTGAAATTAATTTT
GATGACTGTGCAAGTAACCCTTGTATCCATGGAATCTGTATGGATGGCATTAATCGCTACAGTTGTGTCTGCTCA
CCAGGATTCACAGGGCAGAGATGTAACATTGACATTGATGAGTGTGCCTCCAATCCCTGTCGCAAGGGTGCAACA
TGTATCAACGGTGTGAATGGTTTCCGCTGTATATGCCCCGAGGGACCCCATCACCCCAGCTGCTACTCACAGGTG
AACGAATGCCTGAGCAATCCCTGCATCCATGGAAACTGTACTGGAGGTCTCAGTGGATATAAGTGTCTCTGTGAT
GCAGGCTGGGTTGGCATCAACTGTGAAGTGGACAAAAATGAATGCCTTTCGAATCCATGCCAGAATGGAGGAACT
TGTGACAATCTGGTGAATGGATACAGGTGTACTTGCAAGAAGGGCTTTAAAGGCTATAACTGCCAGGTGAATATT
GATGAATGTGCCTCAAATCCATGCCTGAACCAAGGAACCTGCTTTGATGACATAAGTGGCTACACTTGCCACTGT
GTGCTGCCATACACAGGCAAGAATTGTCAGACAGTATTGGCTCCCTGTTCCCCAAACCCTTGTGAGAATGCTGCT
GTTTGCAAAGAGTCACCAAATTTTGAGAGTTATACTTGCTTGTGTGCTCCTGGCTGGCAAGGTCAGCGGTGTACC
ATTGACATTGACGAGTGTATCTCCAAGCCCTGCATGAACCATGGTCTCTGCCATAACACCCAGGGCAGCTACATG
TGTGAATGTCCACCAGGCTTCAGTGGTATGGACTGTGAGGAGGACATTGATGACTGCCTTGCCAATCCTTGCCAG
AATGGAGGTTCCTGTATGGATGGAGTGAATACTTTCTCCTGCCTCTGCCTTCCGGGTTTCACTGGGGATAAGTGC
CAGACAGACATGAATGAGTGTCTGAGTGAACCCTGTAAGAATGGAGGGACCTGCTCTGACTACGTCAACAGTTAC
ACTTGCAAGTGCCAGGCAGGATTTGATGGAGTCCATTGTGAGAACAACATCAATGAGTGCACTGAGAGCTCCTGT
TTCAATGGTGGCACATGTGTTGATGGGATTAACTCCTTCTCTTGCTTGTGCCCTGTGGGTTTCACTGGATCCTTC
TGCCTCCATGAGATCAATGAATGCAGCTCTCATCCATGCCTGAATGAGGGAACGTGTGTTGATGGCCTGGGTACC
TACCGCTGCAGCTGCCCCCTGGGCTACACTGGGAAAAACTGTCAGACCCTGGTGAATCTCTGCAGTCGGTCTCCA
TGTAAAAACAAAGGTACTTGCGTTCAGAAAAAAGCAGAGTCCCAGTGCCTATGTCCATCTGGATGGGCTGGTGCC
TATTGTGACGTGCCCAATGTCTCTTGTGACATAGCAGCCTCCAGGAGAGGTGTGCTTGTTGAACACTTGTGCCAG
CACTCAGGTGTCTGCATCAATGCTGGCAACACGCATTACTGTCAGTGCCCCCTGGGCTATACTGGGAGCTACTGT
GAGGAGCAACTCGATGAGTGTGCGTCCAACCCCTGCCAGCACGGGGCAACATGCAGTGACTTCATTGGTGGATAC
AGATGCGAGTGTGTCCCAGGCTATCAGGGTGTCAACTGTGAGTATGAAGTGGATGAGTGCCAGAATCAGCCCTGC

FIGURE 511B

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CAGAATGGAGGCACCTGTATTGACCTTGTGAACCATTTCAAGTGCTCTTGCCCACCAGGCACTCGGGGCCTACTC
TGTGAAGAGAACATTGATGACTGTGCCCGGGGTCCCCATTGCCTTAATGGTGGTCAGTGCATGGATAGGATTGGA
GGCTACAGTTGTCGCTGCTTGCCTGGCTTTGCTGGGGAGCGTTGTGAGGGAGACATCAACGAGTGCCTCTCCAAC
CCCTGCAGCTCTGAGGGCAGCCTGGACTGTATACAGCTCACCAATGACTACCTGTGTGTTTGCCGTAGTGCCTTT
ACTGGCCGGCACTGTGAAACCTTCGTCGATGTGTGTCCCCAGATGCCCTGCCTGAATGGAGGGACTTGTGCTGTG
GCCAGTAACATGCCTGATGGTTTCATTTGCCGTTGTCCCCCGGGATTTTCCGGGGCAAGGTGCCAGAGCAGCTGT
GGACAAGTGAAATGTAGGAAGGGGGAGCAGTGTGTGCACACCGCCTCTGGACCCCGCTGCTTCTGCCCCAGTCCC
CGGGACTGCGAGTCAGGCTGTGCCAGTAGCCCCTGCCAGCACGGGGGCAGCTGCCACCCTCAGCGCCAGCCTCCT
TATTACTCCTGCCAGTGTGCCCCACCATTCTCGGGTAGCCGCTGTGAACTCTACACGGCACCCCCCAGCACCCCT
CCTGCCACCTGTCTGAGCCAGTATTGTGCCGACAAAGCTCGGGATGGCGTCTGTGATGAGGCCTGCAACAGCCAT
GCCTGCCAGTGGGATGGGGGTGACTGTTCTCTCACCATGGAGAACCCCTGGGCCAACTGCTCCTCCCACTTCCC
TGCTGGGATTATATCAACAACCAGTGTGATGAGCTGTGCAACACGGTCGAGTGCCTGTTTGACAACTTTGAATGC
CAGGGGAACAGCAAGACATGCAAGTATGACAAATACTGTGCAGACCACTTCAAAGACAACCACTGTGACCAGGGG
TGCAACAGTGAGGAGTGTGGTTGGGATGGGCTGGACTGTGCTGCTGACCAACCTGAGAACCTGGCAGAAGGTACC
CTGGTTATTGTGGTATTGATGCCACCTGAACAACTGCTCCAGGATGCTCGCAGCTTCTTGCGGGCACTGGGTACC
CTGCTCCACACCAACCTGCGCATTAAGCGGGACTCCCAGGGGGAACTCATGGTGTACCCCTATTATGGTGAGAAG
TCAGCTGCTATGAAGAAACAGAGGATGACACGCAGATCCCTTCCTGGTGAACAAGAACAGGAGGTGGCTGGCTCT
AAAGTCTTTCTGGAAATTGACAACCGCCAGTGTGTTCAAGACTCAGACCACTGCTTCAAGAACACGGATGCAGCA
GCAGCTCTCCTGGCCTCTCACGCCATACAGGGGACCCTGTCATACCCTCTTGTGTCTGTCGTCAGTGAATCCCTG
ACTCCAGAACGCACTCAGCTCCTCTATCTCCTTGCTGTTGCTGTTGTCATCATTCTGTTTATTATTCTGCTGGGG
GTAATCATGGCAAAACGAAAGCGTAAGCATGGCTCTCTCTGGCTGCCTGAAGGTTTCACTCTTCGCCGAGATGCA
AGCAATCACAAGCGTCGTGAGCCAGTGGGACAGGATGCTGTGGGGCTGAAAAATCTCTCAGTGCAAGTCTCAGAA
GCTAACCTAATTGGTACTGGAACAAGTGAACACTGGGTCGATGATGAAGGGCCCCAGCCAAAGAAAGTAAAGGCT
GAAGATGAGGCCTTACTCTCAGAAGAAGATGACCCCATTGATCGACGGCCATGGACACAGCAGCACCTTGAAGCT
GCAGACATCCGTAGGACACCATCGCTGGCTCTCACCCCTCCTCAGGCAGAGCAGGAGGTGGATGTGTTAGATGTG
AATGTCCGTGGCCCAGATGGCTGCACCCCATTGATGTTGGCTTCTCTCCGAGGAGGCAGCTCAGATTTGAGTGAT
GAAGATGAAGATGCAGAGGACTCTTCTGCTAACATCATCACAGACTTGGTCTACCAGGGTGCCAGCCTCCAGGCC
CAGACAGACCGGACTGGTGAGATGGCCCTGCACCTTGCAGCCCGCTACTCACGGGCTGATGCTGCCAAGCGTCTC
CTGGATGCAGGTGCAGATGCCAATGCCCAGGACAACATGGGCCGCTGTCCACTCCATGCTGCAGTGGCAGCTGAT
GCCCAAGGTGTCTTCCAGATTCTGATTCGCAACCGAGTAACTGATCTAGATGCCAGGATGAATGATGGTACTACA
CCCCTGATCCTGGCTGCCCGCCTGGCTGTGGAGGGAATGGTGGCAGAACTGATCAACTGCCAAGCGGATGTGAAT
GCAGTGGATGACCATGGAAAATCTGCTCTTCACTGGGCAGCTGCTGTCAATAATGTGGAGGCAACTCTTTTGTTG
TTGAAAAATGGGGCCAACCGAGACATGCAGGACAACAAGGAAGAGACACCTCTGTTTCTTGCTGCCCGGGGAGGGG
AGCTATGAAGCAGCCAAGATCCTGTTAGACCATTTTGCCAATCGAGACATCACAGACCATATGGATCGTCTTCCC
CGGGATGTGGCTCGGGATCACATGCACCATGACATTGTGCGCCTTCTGGATGAATACAATGTGACCCCAAGCCCT
CCAGGCACCGTGTTGACTTCTGCTCTCTCACCTGTCATCTGTGGGCCCAACAGATCTTTCCTCAGCCTGAAGCAC
ACCCCAATGGGCAAGAAGTCTAGACGGCCCAGTGCCAAGAGTACCATGCCTACTAGCCTCCCTAACCTTGCCAAG
GAGGCAAAGGATGCCAAGGGTAGTAGGAGGAAGAAGTCTCTGAGTGAGAAGGTCCAACTGTCTGAGAGTTCAGTA
ACTTTATCCCCTGTTGATTCCCTAGAATCTCCTCACACGTATGTTTCCGACACCACATCCTCTCCAATGATTACA
TCCCCTGGGATCTTACAGGCCTCACCCAACCCTATGTTGGCCACTGCCGCCCCTCCTGCCCCAGTCCATGCCCAG
CATGCACTATCTTTTTCTAACCTTCATGAAATGCAGCCTTTGGCACATGGGCCAGCACTGTGCTTCCCTCAGTG
AGCCAGTTGCTATCCCACCACCACATTGTGTCTCCAGGCAGTGGCAGTGCTGGAAGCTTGAGTAGGCTCCATCCA
GTCCCAGTCCCAGCAGATTGGATGAACCGCATGGAGGTGAATGAGACCCAGTACAATGAGATGTTTGGTATGGTC
CTGGCTCCAGCTGAGGGCACCCATCCTGGCATAGCTCCCCAGAGCAGGCCACCTGAAGGGAAGCACATAACCACC
CCTCGGGAGCCCTTGCCCCCCATTGTGACTTTCCAGCTCATCCCTAAAGGCAGTATTGCCCAACCAGCGGGGGCT
CCCCAGCCTCAGTCCACCTGCCCTCCAGCTGTTGCGGGCCCCCTGCCCACCATGTACCAGATTCCAGAAATGGCC
CGTTTGCCCAGTGTGGCTTTCCCCACTGCCATGATGCCCCAGCAGGACGGGCAGGTAGCTCAGACCATTCTCCCA
GCCTATCATCCTTTCCCAGCCTCTGTGGGCAAGTACCCCACACCCCCTTCACAGCACAGTTATGCTTCCTCAAAT
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FIGURE 511C

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GCTGCTGAGCGAACACCCAGTCACAGTGGTCACCTCCAGGGTGAGCATCCCTACCTGACACCATCCCCAGAGTCT
CCTGACCAGTGGTCAAGTTCATCACCCCACTCTGCTTCTGACTGGTCAGATGTGACCACCAGCCCTACCCCTGGG
GGTGCTGGAGGAGGTCAGCGGGGACCTGGGACACACATGTCTGAGCCACCACACAACAACATGCAGGTTTATGCG
TGAGAGAGTCCACCTCCAGTGTAGAGACATAACTGACTTTTGTAAATGCTGCTGAGGAACAAATGAAGGTCATCC
GGGAGAGAAATGAAGAAATCTCTGGAGCCAGCTTCTAGAGGTAGGAAAGAGAAGATGTTCTTATTCAGATAATGC
AAGAGAAGCAATTCGTCAGTTTCACTGGGTATCTGCAAGGCTTATTGATTATTCTAATCTAATAAGACAAGTTTG
TGGAAATGCAAGATGAATACAAGCCTTGGGTCCATGTTTACTCTCTTCTATTTGGAGAATAAGATGGATGCTTAT
TGAAGCCCAGACATTCTTGCAGCTTGGACTGCATTTTAAGCCCTGCAGGCTTCTGCCATATCCATGAGAAGATTC
TACACTAGCGTCCTGTTGGGAATTATGCCCTGGAATTCTGCCTGAATTGACCTACGCATCTCCTCCTCCTTGGAC
ATTCTTTTGTCTTCATTTGGTGCTTTTGGTTTTGCACCTCTCCGTGATTGTAGCCCTACCAGCATGTTATAGGGC
AAGACCTTTGTGCTTTTGATCATTCTGGCCCATGAAAGCAACTTTGGTCTCCTTTCCCCTCCTGTCTTCCCGGTA
TCCCTTGGAGTCTCACAAGGTTTACTTTGGTATGGTTCTCAGCACAAACCTTTCAAGTATGTTGTTTCTTTGGAA
AATGGACATACTGTATTGTGTTCTCCTGCATATATCATTCCTGGAGAGAGAAGGGGAGAAGAATACTTTTCTTCA
ACAAATTTTGGGGGCAGGAGATCCCTTCAAGAGGCTGCACCTTAATTTTTCTTGTCTGTGTGCAGGTCTTCATAT
AAACTTTACCAGGAAGAAGGGTGTGAGTTTGTTGTTTTTCTGTGTATGGGCCTGGTCAGTGTAAAGTTTTATCCT
TGATAGTCTAGTTACTATGACCCTCCCCACTTTTTTAAAACCAGAAAAAGGTTTGGAATGTTGGAATGACCAAGA
GACAAGTTAACTCGTGCAAGAGCCAGTTACCCACCCACAGGTCCCCCTACTTCCTGCCAAGCATTCCATTGACTG
CCTGTATGGAACACATTTGTCCCAGATCTGAGCATTCTAGGCCTGTTTCACTCACTCACCCAGCATATGAAACTA
GTCTTAACTGTTGAGCCTTTCCTTTCATATCCACAGAAGACACTGTCTCAAATGTTGTACCCTTGCCATTTAGGA
CTGAACTTTCCTTAGCCCAAGGGACCCAGTGACAGTTGTCTTCCGTTTGTCAGATGATCAGTCTCTACTGATTAT
CTTGCTGCTTAAAGGCCTGCTCACCAATCTTTCTTTCACACCGTGTGGTCCGTGTTACTGGTATACCCAGTATGT
TCTCACTGAAGACATGGACTTTATATGTTCAAGTGCAGGAATTGGAAAGTTGGACTTGTTTTCTATGATCCAAAA
CAGCCCTATAAGAAGGTTGGAAAAGGAGGAACTATATAGCAGCCTTTGCTATTTTCTGCTACCATTTCTTTTCCT
CTGAAGCGGCCATGACATTCCCTTTGGCAACTAACGTAGAAACTCAACAGAACATTTTCCTTTCCTAGAGTCACC
TTTTAGATGATAATGGACAACTATAGACTTGCTCATTGTTCAGACTGATTGCCCCTCACCTGAATCCACTCTCTG
TATTCATGCTCTTGGCAATTTCTTTGACTTTCTTTTAAGGGCAGAAGCATTTAGTTAATTGTAGATAAGAATA
GTTTTCTTCCTCTTCTCCTTGGGCCAGTTAATAATTGGTCCATGGCTACACTGCAACTTCCGTCCAGTGCTGTGA
TGCCCATGACACCTGCAAAATAAGTTCTGCCTGGGCATTTTGTAGATATTAACAGGTGAATTCCCGACTCTTTTG
GTTTGAATGACAGTTCTCATTCCTTCTATGGCTGCAAGTATGCATCAGTGCTTCCCACTTACCTGATTTGTCTGT
CGGTGGCCCCATATGGAAACCCTGCGTGTCTGTTGGCATAATAGTTTACAAATGGTTTTTTCAGTCCTATCCAAA
TTTATTGAACCAACAAAAATAATTACTTCTGCCCTGAGATAAGCAGATTAAGTTTGTTCATTCTCTGCTTTATTC
TCTCCATGTGGCAACATTCTGTCAGCCTCTTTCATAGTGTGCAAACATTTTATCATTCTAAATGGTGACTCTCTG
CCCTTGGACCCATTTATTATTCACAGATGGGGAGAACCTATCTGCATGGACCTCTGTGGACCACAGCGTACCTGC
CCCTTTCTGCCCTCCTGCTCCAGCCCCACTTCTGAAAGTATCAGCTACTGATCCAGCCACTGGATATTTTATATC
CTCCCTTTTCCTTAAGCACAATGTCAGACCAAATTGCTTGTTTCTTTTTCTTGGACTACTTTAATTTGGATCCTT
TGGGTTTGGAGAAAGGGAATGTGAAAGCTGTCATTACAGACAACAGGTTTCAGTGATGAGGAGGACAACACTGCC
TTTCAAACTTTTTACTGATCTCTTAGATTTTAAGAACTCTTGAATTGTGTGGTATCTAATAAAAGGGAAGGTAAG
ATGGATAATCACTTTCTCATTTGGGTTCTGAATTGGAGACTCAGTTTTTATGAGACACATCTTTTATGCCATGTA
TAGATCCTCCCCTGCTATTTTTGGTTTATTTTTATTGTTATAAATGCTTTCTTTCTTTGACTCCTCTTCTGCCTG
CCTTTGGGGATAGGTTTTTTTGTTTGTTTATTTGCTTCCTCTGTTTTGTTTTAAGCATCATTTTCTTATGTGAGG
TGGGGAAGGGAAAGGTATGAGGGAAAGAGAGTCTGAGAATTAAAATATTTTAGTATAAGCAATTGGCTGTGATGC
TCAAATCCATTGCATCCTCTTATTGAATTTGCCAATTTGTAATTTTTGCATAATAAAGAACCAAAGGTGTAATGT
TTTGTTGAGAGGTGGTTTAGGGATTTTGGCCCTAACCAATACATTGAATGTATGATGACTATTTGGGAGGACACA
TTTATGTACCCAGAGGCCCCCACTAATAAGTGGTACTATGGTTACTTCCTTGTGTACATTTCTCTTAAAAGTGAT
ATTATATCTGTTTGTATGAGAAACCCAGTAACCAATAAAATGACCGCATATTCCTGACTAAACGTAGTAAGGAAA
ATGCACACTTTGTTTTTACTTTTCCGTTTCATTCTAAAGGTAGTTAAGATGAAATTTATATGAAAGCATTTTTAT
CACAAAATAAAAAAGGTTTGCCAAGCTCAGTGGTGTTGTATTTTTTATTTTCCAATACTGCATCCATGGCCTGGC
AGTGTTACCTCATGATGTCATAATTTGCTGAGAGAGCAAATTTTCTTTTCTTTCTGAATCCCACAAAGCCTAGCA
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FIGURE 511D

CCAAACTTCTTTTTTTCTTCCTTTAATTAGATCATAAATAAATGATCCTGGGGAAAAAGCATCTGTCAAATAGGA
AACATCACAAAACTGAGCACTCTTCTGTGCACTAGCCATAGCTGGTGACAAACAGATGGTTGCTCAGGGACAAGG
TGCCTTCCAATGGAAATGCGAAGTAGTTGCTATAGCAAGAATTGGGAACTGGGATATAAGTCATAATATTAATTA
TGCTGTTATGTAAATGATTGGTTTGTAACATTCCTTAAGTGAAATTTGTGTAGAACTTAATATACAGGATTATAA
AATAATATTTTGTGTATAAATTTGTTATAAGTTCACATTCATACATTTATTTATAAAGTCAGTGAGATATTTGAA
CATGAAAAAAAAAA

FIGURE 512

MPALRPALLWALLALWLCCATPAHALQCRDGYEPCVNEGMCVTYHNGTGYCKCPEGFLGEYCQHRDPCEKNRCQN
GGTCVAQAMLGKATCRCASGFTGEDCQYSTSHPCFVSRPCLNGGTCHMLSRDTYECTCQVGFTGKECQWTDACLS
HPCANGSTCTTVANQFSCKCLTGFTGQKCETDVNECDIPGHCQHGGTCLNLPGSYQCQCLQGFTGQYCDSLYVPC
APSPCVNGGTCRQTGDFTFECNCLPGFEGSTCERNIDDCPNHRCQNGGVCVDGVNTYNCRCPPQWTGQFCTEDVD
ECLLQPNACQNGGTCANRNGGYGCVCVNGWSGDDCSENIDDCAFASCTPGSTCIDRVASFSCMCPEGKAGLLCHL
DDACISNPCHKGALCDTNPLNGQYICTCPQGYKGADCTEDVDECAMANSNPCEHAGKCVNTDGAFHCECLKGYAG
PRCEMDINECHSDPCQNDATCLDKIGGFTCLCMPGFKGVHCELEINECQSNPCVNNGQCVDKVNRFQCLCPPGFT
GPVCQIDIDDCSSTPCLNGAKCIDHPNGYECQCATGFTGVLCEENIDNCDPDPCHHGQCQDGIDSYTCICNPGYM
GAICSDQIDECYSSPCLNDGRCIDLVNGYQCNCQPGTSGVNCEINFDDCASNPCIHGICMDGINRYSCVCSPGFT
GQRCNIDIDECASNPCRKGATCINGVNGFRCICPEGPHHPSCYSQVNECLSNPCIHGNCTGGLSGYKCLCDAGWV
GINCEVDKNECLSNPCQNGGTCDNLVNGYRCTCKKGFKGYNCQVNIDECASNPCLNQGTCFDDISGYTCHCVLPY
TGKNCQTVLAPCSPNPCENAAVCKESPNFESYTCLCAPGWQGQRCTIDIDECISKPCMNHGLCHNTQGSYMCECP
PGFSGMDCEEDIDDCLANPCQNGGSCMDGVNTFSCLCLPGFTGDKCQTDMNECLSEPCKNGGTCSDYVNSYTCKC
QAGFDGVHCENNINECTESSCFNGGTCVDGINSFSCLCPVGFTGSFCLHEINECSSHPCLNEGTCVDGLGTYRCS
CPLGYTGKNCQTLVNLCSRSPCKNKGTCVQKKAESQCLCPSGWAGAYCDVPNVSCDIAASRRGVLVEHLCQHSGV
CINAGNTHYCQCPLGYTGSYCEEQLDECASNPCQHGATCSDFIGGYRCECVPGYQGVNCEYEVDECQNQPCQNGG
TCIDLVNHFKCSCPPGTRGLLCEENIDDCARGPHCLNGGQCMDRIGGYSCRCLPGFAGERCEGDINECLSNPCSS
EGSLDCIQLTNDYLCVCRSAFTGRHCETFVDVCPQMPCLNGGTCAVASNMPDGFICRCPPGFSGARCQSSCGQVK
CRKGEQCVHTASGPRCFCPSPRDCESGCASSPCQHGGSCHPQRQPPYYSCQCAPPFSGSRCELYTAPPSTPPATC
LSQYCADKARDGVCDEACNSHACQWDGGDCSLTMENPWANCSSPLPCWDYINNQCDELCNTVECLFDNFECQGNS
KTCKYDKYCADHFKDNHCDQGCNSEECGWDGLDCAADQPENLAEGTLVIVVLMPPEQLLQDARSFLRALGTLLHT
NLRIKRDSQGELMVYPYYGEKSAAMKKQRMTRRSLPGEQEQEVAGSKVFLEIDNRQCVQDSDHCFKNTDAAAALL
ASHAIQGTLSYPLVSVVSESLTPERTQLLYLLAVAVVIILFIILLGVIMAKRKRKHGSLWLPEGFTLRRDASNHK
RREPVGQDAVGLKNLSVQVSEANLIGTGTSEHWVDDEGPQPKKVKAEDEALLSEEDDPIDRRPWTQQHLEAADIR
RTPSLALTPPQAEQEVDVLDVNVRGPDGCTPLMLASLRGGSSDLSDEDEDAEDSSANIITDLVYQGASLQAQTDR
TGEMALHLAARYSRADAAKRLLDAGADANAQDNMGRCPLHAAVAADAQGVFQILIRNRVTDLDARMNDGTTPLIL
AARLAVEGMVAELINCQADVNAVDDHGKSALHWAAAVNNVEATLLLLKNG

FIGURE 513

GAAACAAGCACTGGATTCCATATCCCACTGCCAAAACCGCATGGTTCAGATTATCGCTATTGCAGCTTTCATCAT
AATACACACCTTTGCTGCCGAAACGAAGCCAGACAACAGATTTCCATCAGCAGG**ATG**TGGGGGCTCAAGGTTCTG
CTGCTACCTGTGGTGAGCTTTGCTCTGTACCCTGAGGAGATACTGGACACCCACTGGGAGCTATGGAAGAAGACC
CACAGGAAGCAATATAACAACAAGGTGGATGAAATCTCTCGGCGTTTAATTTGGGAAAAAAACCTGAAGTATATT
TCCATCCATAACCTTGAGGCTTCTCTTGGTGTCCATACATATGAACTGGCTATGAACCACCTGGGGGACATGACC
AGTGAAGAGGTGGTTCAGAAGATGACTGGACTCAAAGTACCCCTGTCTCATTCCCGCAGTAATGACACCCTTTAT
ATCCCAGAATGGGAAGGTAGAGCCCCAGACTCTGTCGACTATCGAAAGAAAGGATATGTTACTCCTGTCAAAAAT
CAGGGTCAGTGTGGTTCCTGTTGGGCTTTTAGCTCTGTGGGTGCCCTGGAGGGCCAACTCAAGAAGAAAACTGGC
AAACTCTTAAATCTGAGTCCCCAGAACCTAGTGGATTGTGTGTCTGAGAATGATGGCTGTGGAGGGGGCTACATG
ACCAATGCCTTCCAATATGTGCAGAAGAACCGGGGTATTGACTCTGAAGATGCCTACCCATATGTGGGACAGGAA
GAGAGTTGTATGTACAACCCAACAGGCAAGGCAGCTAAATGCAGAGGGTACAGAGAGATCCCCGAGGGGAATGAG
AAAGCCCTGAAGAGGGCAGTGGCCCGAGTGGGACCTGTCTCTGTGGCCATTGATGCAAGCCTGACCTCCTTCCAG
TTTTACAGCAAAGGTGTGTATTATGATGAAAGCTGCAATAGCGATAATCTGAACCATGCGGTTTTGGCAGTGGGA
TATGGAATCCAGAAGGGAAACAAGCACTGGATAATTAAAAACAGCTGGGGAGAAAACTGGGGAAACAAAGGATAT
ATCCTCATGGCTCGAAATAAGAACAACGCCTGTGGCATTGCCAACCTGGCCAGCTTCCCCAAGATG**TGA**CTCCAG
CCAGCCAAATCCATCCTGCTCTTCCATTTCTTCCACGATGGTGCAGTGTAACGATGCACTTTGGAAGGGAGTTGG
TGTGCTATTTTTGAAGCAGATGTGGTGATACTGAGATTGTCTGTTCAGTTTCCCCATTTGTTTGTGCTTCAAATG
ATCCTTCCTACTTTGCTTCTCTCCACCCATGACCTTTTTCACTGTGGCCATCAGGACTTTCCCTGACAGCTGTGT
ACTCTTAGGCTAAGAGATGTGACTACAGCCTGCCCCTGACTGTGTTGTCCCAGGGCTGATGCTGTACAGGTACAG
GCTGGAGATTTTCACATAGGTTAGATTCTCATTCACGGGACTAGTTAGCTTTAAGCACCCTAGAGGACTAGGGTA
ATCTGACTTCTCACTTCCTAAGTTCCCTTCTATATCCTCAAGGTAGAAATGTCTATGTTTTCTACTCCAATTCAT
AAATCTATTCATAAGTCTTTGGTACAAGTTTACATGATAAAAGAAATGTGATTTGTCTTCCCTTCTTTGCACTT
TTGAAATAAAGTATTTATC

FIGURE 514

MWGLKVLLLPVVSFALYPEEILDTHWELWKKTHRKQYNNKVDEISRRLIWEKNLKYISIHNLEASLGVHTYELAM
NHLGDMTSEEVVQKMTGLKVPLSHSRSNDTLYIPEWEGRAPDSVDYRKKGYVTPVKNQGQCGSCWAFSSVGALEG
QLKKKTGKLLNLSPQNLVDCVSENDGCGGGYMTNAFQYVQKNRGIDSEDAYPYVGQEESCMYNPTGKAAKCRGYR
EIPEGNEKALKRAVARVGPVSVAIDASLTSFQFYSKGVYYDESCNSDNLNHAVLAVGYGIQKGNKHWIIKNSWGE
NWGNKGYILMARNKNNACGIANLASFPKM

FIGURE 515

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GCGCCGCGGCGCGGAGTCCCGGCTGCGGGATAGACCGAGGGCCATGGCCGCCTCTCCCGGACCCGCCGGCGTTGG
CGGCGCCGGAGCAGTCTACGGCTCCGGCTCTTCGGGCTTCGCCCTCGACTCGGGACTGGAGATCAAAACTCGCTC
GGTGGAGCAGACGCTACTCCCGCTGGTTTCTCAGATCACCACGCTTATTAATCATAAAGATAATACCAAAAAGTC
TGATAAAACTCTGCAAGCAATTCAGCGTGTAGGACAAGCTGTCAACTTGGCAGTTGGAAGATTTGTTAAAGTAGG
AGAAGCTATAGCCAATGAAAACTGGGATTTGAAAGAAGAAATAAATATTGCTTGTATTGAAGCTAAACAAGCAGG
AGAAACAATTGCAGCACTTACAGACATAACCAACTTGAACCATCTGGAATCTGATGGGCAGATCACAATTTTTAC
AGACAAAACAGGAGTGATAAAGGCTGCAAGATTACTTCTTTCTTCAGTGACAAAAGTGTTGTTGCTGGCAGACCG
AGTAGTCATTAAACAGATAATAACATCAAGAAATAAGGTTCTCGCAACTATGGAAAGACTAGAGAAAGTGAATAG
CTTTCAAGAGTTTGTCCAAATATTCAGTCAATTTGGAAATGAAATGGTGGAGTTTGCACATCTGAGTGGAGATAG
ACAAAATGATTTGAAAGATGAAAAGAAAAAGGCAAAAATGGCAGCAGCTAGGGCAGTTCTTGAAAAGTGTACAAT
GATGCTTCTCACAGCTTCAAAGACATGTCTGAGGCATCCTAACTGCGAATCAGCCCATAAAAACAAAGAAGGAGT
ATTTGACCGTATGAAAGTGGCATTGGATAAGGTCATTGAAATTGTGACTGACTGTAAACCGAATGGAGAGACTGA
CATTTCATCTATCAGTATTTTTACTGGAATTAAGGAATTCAAGATGAATATTGAAGCTCTTCGGGAGAATCTTTA
TTTTCAGTCCAAAGAGAACCTTTCTGTGACATTGGAAGTCATCTTGGAGCGTATGGAGGACTTTACTGATTCTGC
CTACACCAGCCATGAGCACAGAGAACGCATCTTGGAACTGTCAACTCAGGCGAGAATGGAACTGCAGCAGTTAAT
TTCTGTGTGGATTCAAGCTCAAAGCAAGAAAACAAAAAGCATCGCTGAAGAACTGGAACTCAGTATTTTGAAAAT
CAGTCACAGTCTTAATGAACTTAAGAAAGAACTTCATAGTACAGCGACACAGCTGGCAGCAGATCTATTAAAATA
CCATGCTGATCATGTGGTTCTAAAAGCATTAAAACTTACTGGAGTAGAAGGAAATTTAGAAGCTTTGGCTGAATA
TGCCTGTAAACTCTCTGAACAGAAAGAGCAGCTTGTTGAGACCTGTCGATTGTTACGACACATATCTGGGACAGA
ACCTCTGGAAATAACCTGTATACATGCAGAGGAGACATTTCAGGTGACTGGCCAACAGATAATTTCTGCTGCTGA
AACATTGACATTGCATCCATCTAGTAAAATTGCTAAAGAAAACCTAGATGTATTTGTGAAGCTTGGGAATCCCA
AATTAGTGACATGTCAACACTGCTGAGAGAAATCAATGACGTGTTTGAAGGAAGACGAGGAGAGAAGTATGGCTA
CCTTTCACTTCCAAAGCCAATGAAGAATAATGCAAACCTGAAATCATTAAAGCCAGACAAGCCTGACTCTGAGGA
GCAAGCCAAGATAGCAAAGCTTGGACTTAAGCTGGGTTTGCTCACCTCTGACGCTGACTGCGAAATTGAGAAGTG
GGAAGATCAGGAGAATGAGATTGTTCAATATGGACGGAACATGTCCAGTATGGCCTATTCTCTGTATTTATTTAC
TAGAGGAGAGGGGCCACTGAAAACTTCCCAGGATTTAATTCATCAACTAGAGGTTTTTGCTGCAGAGGGTTTAAA
GCTTACTTCCAGTGTTCAAGCTTTTTCAAAACAGCTGAAAGACGATGACAAGCTTATGCTTCTCCTGGAAATAAA
CAAGCTAATTCCTCTATGCCACCAGCTCCAGACAGTAACTAAGACTTCTTTGCAGAATAAAGTATTTCTAAAGGT
TGACAAGTGTATTACGAAGACAAGATCCATGATGGCTCTCTTAGTCCAACTTCTTTCACTTTGTTATAAACTGCT
GAAGAAGCTTCAGATGGAAAATAACGGATGGGTCTCAGTTACAAATAAGGACACTATGGATAGTAAAACTTGAGA
AGCTTTTGGGGTCAGATCTCTGGAACATCATGTGATGAAGCTGACATTTTTAAAAATCAAATGATCCTTTATCTT
TTCAGAAATTCATCAATTTTATAAAGAAAACAATATTGAAATTTTGCTCTATTTTCTGATCATGAAACTGATTGT
AAAGCTTTTTGACAACTAATAAATGTCTTGGTAATTGCTAGATTCT
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FIGURE 516

MAASPGPAGVGGAGAVYGSGSSGFALDSGLEIKTRSVEQTLLPLVSQITTLINHKDNTKKSDKTLQAIQRVGQAV
NLAVGRFVKVGEAIANENWDLKEEINIACIEAKQAGETIAALTDITNLNHLESDGQITIFTDKTGVIKAARLLLS
SVTKVLLLADRVVIKQIITSRNKVLATMERLEKVNSFQEFVQIFSQFGNEMVEFAHLSGDRQNDLKDEKKKAKMA
AARAVLEKCTMMLLTASKTCLRHPNCESAHKNKEGVFDRMKVALDKVIEIVTDCKPNGETDISSISIFTGIKEFK
MNIEALRENLYFQSKENLSVTLEVILERMEDFTDSAYTSHEHRERILELSTQARMELQQLISVWIQAQSKKTKSI
AEELELSILKISHSLNELKKELHSTATQLAADLLKYHADHVVLKALKLTGVEGNLEALAEYACKLSEQKEQLVET
CRLLRHISGTEPLEITCIHAEETFQVTGQQIISAAETLTLHPSSKIAKENLDVFCEAWESQISDMSTLLREINDV
FEGRRGEKYGYLSLPKPMKNNANLKSLKPDKPDSEEQAKIAKLGLKLGLLTSDADCEIEKWEDQENEIVQYGRNM
SSMAYSLYLFTRGEGPLKTSQDLIHQLEVFAAEGLKLTSSVQAFSKQLKDDDKLMLLLEINKLIPLCHQLQTVTK
TSLQNKVFLKVDKCITKTRSMMALLVQLLSLCYKLLKKLQMENNGWVSVTNKDTMDSKT